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HOW TO MAKE MONEY
OUT OF
INVENTIONS

AN
ADVISER FOR PATENTEES.

BY
AUGUST SCHEMMEL.

NASHVILLE, TENN.
C. LEROI, PRINTER, N. CHERRY ST.
1890.



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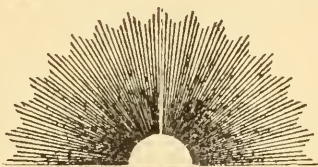
PLEASE READ.

As generally the introduction is not read, I put the above caption over mine. So far as I am aware, no author has ever tried to write a help and guide to inventors, though every inventor must acknowledge that such a guide is necessary. The position of most inventors, I find after long observation, to be the following :

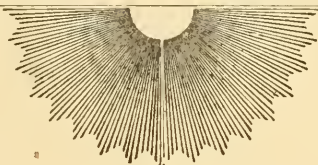
In a lucky moment the invention was born. With hard toil of perhaps months and years the inventor worked at the product of his mind before it was finished. Full of hope, he has at length completed it, and waits for the granting of his patent. That happy moment comes. He has his patent. Yes, but what now ? He must make the patent profitable, and that is often very difficult. Sometimes all trials are unavailing, and why ? Because he did not introduce it himself. It is a well known fact that no one can speak as well for a thing as the inventor himself. No one can explain all the uses and value of an invention as he can. It is therefore not advisable to trust to a stranger anything that can be done by the inventor.

To help and advise inventors I have printed this book. In it will be found all that is necessary for the realization of an invention : The names of thousands of firms, which will be of use for the selling of patents ; brokers, if one wants to sell stocks ; newspapers, for advertisements ; and contract formulas. In fact the inventor can find in it every thing that is necessary to enable him to help himself. Wherever I could I have given examples, so as to make it more clear, and also to make the reading matter as interesting and attractive as possible, and to show what this or that inventor was capable of doing.





❄ Part ❄ First. ❄







CHAPTER I.

USEFUL AND INTERESTING.

IT is an old truth, that the ability to invent and the capacity to turn the invention into money, is very seldom united in one head—just as scholarship and philosophy rarely stand together. Though an inventor must have technical knowledge, in most cases, still his mind takes a different turn from that of a merchant and seller. While the eye of the inventor looks thoughtfully on the problem of his mind, the merchant looks in the distance. On account of this difference it is easily explained why the merchant's view of an invention is quite different from that of the inventor. The merchant regards the invention as he would any other salable article, though he too can be mistaken in its value; but the inventor sees his invention only through the eyes of a lover, or as a mother would her child, or an author his book. To this physiological discord, in regard to the value of the invention, others are added from the circle of critics, which help to tangle up the opinion. Even the locomotive, steamboat, and the sewing machine had much skepticism to conquer.

We must excuse if many inventors meet us with a great deal of self-consciousness. The world has sinned much more through its unbelief than inventors have by their over-estimation. The goal of the inventor is generally the making of money, so he always tries to sell or use his patent in the most advantageous way.

The needs of inventors, whom study or accident gave a lucky idea, are vastly different. Not every invention can be used, and not every idea is an invention. How many old ideas are thought about as new, and how many people are working on a "perpetuum mobile" yet? "Not every ignorant man is a dunce," Seume says, and so it happens that many a learned head tries problems which will never bring him any good. Any help which prevents the throwing away of money, time and wisdom is therefore a great boon.

One could ask, when will the period come when nothing more can be invented, when everything is so good that no improvement is necessary? To this I will answer, that as soon as a land stops to make progress it is going backward. Inventions arise out of the discoveries of wisdom. As this always shows the material in new and different lights, so inventions help to give us new uses for them. The development of inquiry for many necessities, is the attraction to find out something new and better. Even the labor question has supported the progress of invention; especially the United States have shown that high wages aid the advance of machine work, and, through this, have a good effect on industry. The area of inventions and the development of them

is so great that the human mind has, and always will, find something new. It is a good sign of our culture that industrial advance must not always be paid with the martyrdom of the person, but that it often helps him up to a fortune and social standing. Inventors stand on a level with statesmen and scholars, and those who inherit wealth and title; for the good derived from inventions, and the energy and sharpness of mind which is bestowed on them is not behind science or statesmanship.

That one can earn money, and sometimes a great deal of it, through inventions is only the acquirement of the last century. The ancient records do not tell how much this or that celebrated philosopher, poet or artist earned. The middle ages, also, do not record much of the private life and financial standing of inventors. Under the progress and intercourse of city life, and the influence of geographical and scientific discoveries, industry makes advances which the ancients never thought of. Art enriched itself with oil-painting and the many engravings; strategy with new weapons and ways of transport; house-furnishers with beautiful fire-places, expensive carpets and articles of luxury out of glass, delfware and metals. Goldsmiths wrought, with wonderful patience, things which will even now create envy. The most valuable thing on earth, time, was obliged to submit to a more complete control through watches and clocks. Human thought was penned up in the insignificant little signs which typography called into life.

The middle ages record more of the life and earnings of painters, sculptors, architects and alchemists

than of inventors. Any way, the inventors could not make money until the state granted them a right of possession. Such a right was first issued in the sixteenth century, by a state which was very anxious to advance in industry. In England the first patent was granted in 1623, though, of course, this was a very simple thing, called a privilege, and was granted to the inventor for a certain number of years. In the year 1791 the first was granted in France. Germany had introduced patents already in the beginning of the century, but each little state had its own way of granting them, and therefore in no land was the invention protected as little as in Germany. In July, 1877, there first appeared a united German patent law.

This is not the place to make war against the betrayer of invention rights, and still less to carry it on in the one-sided way that is generally the case. It has no, or very little value to defend or assail the invention right without regarding its relation to other rights. Though the patent right is very incomplete, still it is better than none. Without a patent no invention can bring money to the inventor. A great hindrance to the introduction of new inventions is the "practical man." By this I do not mean the man who works in his special field until he masters it; he has theoretical knowledge enough, if not to invent new things, still to accept what others invent. This is the real practical man, and he can only be praised. But the practical man, as one generally understands, is one who knows all about his article, but nothing else. His look only goes as far as the old; he will

not acknowledge the newest improvements; even the greatest new invention he only calls plan-making. When he finds that an invention is really useful, he will sulkily accept it, so as not to be too far behind the others. But never would he give his money and time for things that the whole world had not already found good. It is this practical man, as I have said before, who is a hindrance to improvements. For years he kept back the use of smelting oven-gases, and it is his fault that now so much of this gas is allowed to escape. It was such a man who, when the optical telegraph was invented, said, "Do not use this manner of correspondence. I am a practical man, and I believe that the best way is to sit down, write a letter, give it to a messenger and put this man on a horse." In the next generation his follower would say of the telegraph with its unseen power for transmitting sound: "I do not believe in your unseen power. I am a practical man, and believe only in the optical telegraph, which I can see working." Just so the practical man acted when they showed him the Siemens regenerator oven. "Nonsense," he said, "you turn coals to gas and then burn them again? I am a practical man, and when I want heat I light my coals and burn them." No better did he think of the Bessemer steel. The behavior of the practical man has also the following reason: If anybody comes to him with improvements and offers them to him, it offends him, and he cannot understand how a stranger, and a man perhaps younger than he, who, it may be, does not understand every thing of the branch which he wants to improve, can make any inventions in it.

Sometimes the owners of large establishments are technical men, but generally they only think of the selling part. In such cases the decision falls to the lot of the headman, who is often, for some reason or other, a practical man.

Of course, it is true that more than one-half of the patents are useless; still the advance of the nation is dependent on them. The army and the navy, the whole strength of the nation depends on the restless, eager inventors. Many inventions are suppressed through the efforts of the practical man. Think of Bessemer! Long years he worked in vain. The practical man laughed at him, and put many hindrances before him, but he won. Did Watt, Stephenson or Faraday have any better lot?

Many professional inventors ought to be suppressed, but still it is always better to endure them than to act like the practical man, who watches another build a house without helping him in the least, and, when it is finished, is ready to move in, and even like the cuckoo, crowd out the rightful owner and live in it alone.

The inventors, hurt because the money and the people do not run after them, very often because they do not know how to use their patent profitably, especially if it is a foreign one, permit their self-assurance to sink slowly to the freezing point. They forget when they have to bring their patent to the market, and that the taxes are not paid, so little by little the patent becomes void, and leaves the owner nothing but the knowledge that he once possessed patents. Often it is the inventor's fault, who, after giving much money toward making the patent, does

not give enough to advertise it. He thinks that millions of people have been waiting for his patent, and will receive it gladly and pay thousands for it.

The value of an invention lies not always in its real worth or the wisdom and energy of its inventor, though this is nearly always the case. Luck plays an important part, but I will not say that it always helps those who are forsaken by Minerva.

To lay an invention before the eyes of the world and keep it there, one needs a firm will and a firm belief in the thing itself. The plain idea of an invention can arise out of many reasons, and is not always the principal thing; it can be the result of hard study or of an accident.

Now and then an original mind strikes a new vein and gives the inventive human a mighty impulse which lasts through centuries. Most of the inventions are not entirely new, but only modifications and improvements of old ideas known to very few and not in public use. When we read the story of mechanic inventions, we often see a new idea which suddenly vanishes and is not heard of any more until some one, on account of the needs of his time, commences it anew and following the footprints of the others, makes it successful. There are inventions which are invented before their time, these are projects which, because there are not means enough to complete them, must wait until they are needed. This explains why many inventors now can do what their predecessors were unable to do. Louis Napoleon says the following on this subject: "Inventions which are ahead of their time must remain unused until the common intelligence rises up to them."

The circumstance that most inventions are products of the past is used by a kind of socialistic law to put down the fame of inventors and even to try to assail the patent rights. Of the first part of this attack, which assails the fame of an inventor, Reuleaux, the famous author of the *Kinematic*, remarks: "When I would try to show how new machines and new mechanisms are built, I do not intend to put down the value of inventions in the machine field. I only would find for the inventive head new and valuable means to work. I want to raise the ideas, not to put them down. Only one who has not invented old things, that is, spent much time on a subject and then found that some other person had made that before, can look down on inventors that have done this. Often they say it is the inventor's fault, but it is very easy to do this."

The ownership right of inventors has as just a claim as all the other rights. Some one can accidentally discover a mine, and yet the law gives him sole right to it.

The right of patent ownership is the simplest among its fellows. The proud right of the land owner is first, and is followed by the simpler of the capitalists, the mine owners, the authors, the artists, and last of the whole row the much abused, limited, highly taxed inventors. It plays the role that philosophy has under the sciences, according to Kant. Though the queen of them all, it carries the light for others.

What an invention is, and especially a new invention, people never agree about. As before mentioned, there are very few entirely new ideas, which no

man has thought about, and which would sink the words of Ben Akiba, "There is nothing new under the sun," into the ground.

The writings of gone centuries have in them thoughts and ideas which are very much like ours. For instance, in the works of the learned monk, Bacon, we find these interesting remarks : "I will point out some of the wonders of beautiful nature, which are no magic art, and which no magic art could produce. There may be instruments made with whose help one man can make a ship sail faster than those filled with sailors. One may make a wagon which will ride with unbelievable fastness without horses or any other animal in front of it. And flying machines will be constructed in which a man can sit comfortably and fly above in the air like a bird. A little machine will be invented with whose help a man can pull thousands of his fellow-creatures even against their will, to himself. Also, machines with whose help man will be enabled to descend into the depths of the ocean without danger."

This one extract shows us that our forefathers had just as many ideas and just as good ones as we, and that it would be very hard to say and prove that any idea we now have is absolutely new. Between an idea of an invention and an invention itself is a great step. By some inventions the central point is the idea, in others the practical development of it. For instance, after the treatment of vulcanization and hardening of India rubber was invented, out of these few inventions ever so many others were made ; the India rubber was used as water-tight material, elastic beds, and many other things ; almost in every busi-

ness it is needed. It is made into jewelry, stamps, billiard balls, and pressed articles of many kinds. In short, the ideas were here the principal things, and not the technical difficulties.

We are satisfied with saying that all things are new inventions if they are a good deal different from any thing of the same kind already invented. Accordingly, if the difference is large we call it a new invention; if smaller, an improvement or an enlargement. As soon as the first sewing machine was made this idea was not new any more; perhaps even before Howe had made his first model, others had thought that an iron tailor would be very good, and, may be, some had tried to make one, without success. Notwithstanding, hundreds of sewing machines were patented, for each one had a little originality.

Who, in our time, has any special work and does not try to know at least a little about the improvements and new inventions in his branch, must be a very strange man. However, just the inventors are very little inclined to compare their ideas with other people's, and study about their branch. Often the inventor is not even very well acquainted with the profession he wishes to reform. Arkwright had, for instance, no idea of textile industry, and only his firm will to complete his invention, helped him through the many difficulties and made him a rich man in the end. Leblanc, the founder of the soda industry, was a doctor; Paxton, whom we must thank for the first world's fair building, was a gardner; Armstrong, inventor of the cannon of the same name, was a lawyer; and so we could give many other examples in almost every branch of industry. It is a plain and well known

fact, that the men who invented the greatest military improvements were peaceable citizens and not soldiers as we might suppose. Just as little as engineers invented powder, guncotton, or dynamite ; it was not they who contrived the torpedo, the field telegraph, and many other things so essential to our modern strategy. All these inventions came from private technologists. All these things must be regarded, if one has to judge inventions of amateurs. If there is a little doubt on the part of professionals, still they should always bear the above mentioned facts in mind.

The examination of an invention to find out whether it is new or not must be treated in various ways, if you want to find out in foreign lands or in your own country. For when an invention is found new in one country and is protected through a patent, this may not be the case in other countries, and what is really new in one may be long invented in another, or even obsolete. It is astonishing, sometimes, how long it takes for a thing that is really useful, to find its way from one country to another. Before the sewing machine came into use in Europe, eight years had passed, and while England and America used steam-engines, it took long for the continent to follow.

It is not always the great inventions that bring riches ; no, quite simple, common things of daily use. Even more or less useless things can make a pretty good profit if they are patented. During the world's fair in Philadelphia an American named Cooke had a so-called continental fan, in the shape of an American eagle, patented and sold the fan at five

cents a piece, selling 700,000 fans, and making considerable profit. Great inventions do not always pay immediately. Bessemer used up many thousands of dollars before he got even a penny out of it, and if he had then lost patience and stopped putting money in he would have lost all.

As the inventing and trying of a patent is the technologist's part, so the selling and making into money is the merchant's. In short, after a man has invented something he must turn into a speculative merchant to sell it. To give rules for the sale of a patent is very hard and nearly impossible. Examples of how others use theirs is the best way to find out. Therefore, in another chapter I have mentioned some. In most cases, however, the talent and luck of the person must help.

Not always, nay, scarcely ever, has the patent holder money enough to build a factory for his article himself. Very often he has to ask for help to be able to patent it. The way to find out who will lend money, is to advertise in the newspapers. In many cases active partners are not necessary, and one finds often private gentlemen, widows with some capital, and clerks, the most willing to assist in the manufacture of a good article, and by it increase their property. These, of course, are also the people who are cheated out of their little money by swindlers, because they are simple and believe easily. The story of great sensational patents and inventions is often a swindle. I know a case of a man who, with the help of a refusal of the patent office, of which he showed only the upper half, succeeded in making a good natured banker lend him fifteen hundred dollars; another in-

ventor of this kind entrapped a harmless restaurant keeper and swindled him out of sixteen hundred dollars. Every good idea may be misused, and we mention the above for the good of patent holders and inventors, to show them that it is not always an active man who will lend them money.

At the end we will say what good patents do for some classes. In what degree they are useful among working men, one can read out of the report of an English manufacturer. He tells first, that though he possesses many patents, he never invented anything, but that he bought them all. Poor men and working people were those whom he bought patents from. In his whole neighborhood he knew of no employer who had invented anything. Once he went into a poor hut and there found a man working on a machine which was fastened to a wooden chair, the only one in the house. This machine was patented and he himself was the owner of the patent.

CHAPTER II.

WHAT IS A PATENT?

With the name "Patent," "Erfindungs-Privilegium, (invention privilege)," "Brevet s. g. d. g., (sans garantie du gouvernement, without guarantee of the government,)" one designates the received permission to manufacture a newly invented article, or to make anything with a new process, during a certain number of years, in a certain country. The receiving of such a privilege and the holding of it during the longest time is dependent on the fulfillment of certain things.

These patent laws fall into two groups, one the application and the other the examination.

The application used in Belgium, England, France, Italy, Luxemburg, Norway, Austria, Portugal, Sweden, and Spain, does not give the patent holder the least guarantee that his patent is new. It simply consists: that with the addition of a patent taxes receipt, description, and perhaps drawings and model, the inventor presents to the magistrate a petition to grant or give a patent to the invention described. If this petition and the description, drawings, etc., are written and sent in a formally correct style the patent

will be granted, without an examination to find out whether it is new or not ; it being supposed that it is new. If, now, after some time, perhaps, it is found that the invention was not new it gets void and is lost. The examination, at present only used in America, Canada, Denmark, Germany and Russia, is not only in regard to the formally right application, but also to the newness of the invention, and in America, Canada and Russia it even regards the usefulness.

But not even this examination can give a positive guarantee, for even the patent officers may overlook something, and the patented invention may not be new. Any way it gives a greater security and certainty of the validity of the patent than an unexamined one. The invalid declaration of a patent can occur during any time between the granting of the patent and its expiration, and may happen because it is not new, or because the inventor carelessly forgot to pay the dues. In most cases there must be a third person who hands in the declaration and gives the evidence.

CHAPTER III.

WHO CAN RECEIVE A PATENT.

WE must distinguish—

- a* Invention patents.
- b* Introduction patents.
- c* Improvement patents.
- d* Addition patents.

a Under invention patents, to distinguish them from introduction patents, one understands the first privilege to manufacture an article in any country. This is granted without caring what nationality the applicant is, whether a foreigner or a citizen of America, Belgium, Canada, Germany, England, France, Italy, Austria, Portugal, Russia, Sweden or Spain, but only to the original inventor, or his descendants and substitutes.

In Luxemburg, only to a native inventor.

If a man who is not authorized has applied for and received a patent, the real owner and inventor can dispute with him for the patent.

In Denmark and Norway, the one who mentions or applies first to the magistrate.

b Introduction patents are those which are patented in foreign countries, and are now sought for in this

country, therefore are applied for after the first patent is gained. These can be applied for and received by any one who is first, excepting in America, Canada and Sweden, where they are only given to the foreign inventor or his descendants, and in Austria, only the foreign patent holder or lawful descendants can get it.

c Improvement patents are patents on improvements of already patented inventions, without hindering the rights of a third, and everybody can receive them. In Russia, however, during the length of the original patent, only the holder can get an improvement patent. In some other states a certain time is reserved for the holder of the principal patent, during the limits of which he alone can get a patent on an improvement of his article. In France, one year; in Italy, six months; in Portugal, one year.

d Addition patents are improvement patents which in Belgium, Germany, France, Italy and Spain, are granted as additions to already existing patents. These only the holder of the original patent can receive. They are not subject to yearly taxes.



CHAPTER IV.

WHEN MUST FOREIGN PATENTS BE APPLIED FOR?

IN France.—Before the invention is anywhere described through prints, or is in any way published so that any expert third can make it.

IN Spain.—Invention patent for 20 years.—As the above, with the further rule that the invention must not be patented in any other country before the application.

IN Spain.—Invention patent for 10 years.—At the latest, within two years after a patent has been granted in another country.

In Belgium.	} For invention patents. Before the invention has come into use in any country, or is anywhere described through prints or is published so as to enable an expert third to make it.
In Denmark.	
In Germany.	
In Italy.	
In Luxemburg.	
In Norway.	
In Sweden.	
In Portugal.	
In Russia.	

In England.
In Austria.

} Before the invention is manufactured by a third, or brought to sale, or if it is so described as to enable an expert third to make it.

In Canada.—Within a year after it is patented in another country.

In Portugal.
In Russia.
In Spain,

} For introduction patents.
Before the invention is manufactured or used in the country.

I would especially advise the patentee to be very careful in applying for patents in foreign countries. Only apply for them in a certain order, to make them last as long as possible.



CHAPTER V.

HOW LONG DO PATENTS LAST?

*In America	17 years.
*In Belgium	20 “
*In Canada	15 “
In Denmark	5-10 “
In Denmark, introduction patents,	5 “
In Germany	15 “
*In England	14 “
*In France	15 “
*In Italy	15 “
*In Luxemburg	15 “
In Norway	5-10 “
*In Austria	15 “
In Portugal	15 “
In Portugal, introduction patents	5 “
In Russia	3-10 “
In Russia, introduction patents	1-6 “
*In Sweden	3-15 “
In Spain	20 “
In Spain	10 “
In Spain, introduction patents	5 “

Introduction patents become void in the countries marked thus * at the same time with the first invalid and first applied for foreign patent; in all states where nothing is mentioned they last as long as invention patents.

Addition patents never last longer than their original or invention patent.

CHAPTER VI.

OF GREAT IMPORTANCE TO OWNERS OF FOREIGN PATENTS.

IN the patent laws of all foreign countries, with the exception of Germany's, is a paragraph which says that if a patent, through any circumstance whatever, should become void, the patent in this land will also expire; in other words, if in Belgium, for instance, the owner forgets to pay the tax or neglects anything and the patent is lost, he will also lose it in all other countries, with, of course, the exception of Germany. The principal reason that so many patents are lost is because the owner forgets to pay the yearly tax. We therefore mention all the countries where it is exacted:

1. Belgium, 10 francs, and for every following year 10 francs more; that is, for the second year 20 francs, third year 30 francs, etc.

2. Germany, for the first and second years, 50 marks, and then for the other years, an advance of 50 marks per year, making 100 marks for the third, 150 marks for the fourth year, etc.

3. France, 100 francs every year.

4. Italy, for the first year, 50 lires, for the 2-3d years, 50 lires; for the 4th-6th years, 75 lires; for the 7th-9th years, 100 lires; for the 10th-12th years, 125 lires; for the 13th-15th years, 145 lires.

5. Austria, for each of the first five years, 26.25 florins; for the 6th year, 39.37 florins; for the 7th year, 46 florins; for the 8th year, 52.50 florins; for the 9th year, 59 florins; for the 10th year, 65.63 florins; for the 11th year, 78.75 florins; for the 12th year, 91.87 florins; for the 13th year, 105 florins; for the 14th year, 118.13 florins; for the 15th year, 131.25 florins

6. Russia, for the first year, 90 rubles; for the 2d year, 120 rubles; for the 3d year, 180 rubles; for the 4th year, 240 rubles; for the 5th year, 300 rubles; for the 6th year, 360 rubles.

7. Spain, for the first year, 100 pesetas, and for each following year, an advance of 10 pesetas per year.

Furthermore, a correct patent can be lost through the following reasons:

A special examination to find out whether the article is new or not takes place in very few countries. This examination, and the patent afterwards received, does not guarantee that the patent is absolutely new and valid to its end. Everybody in this country, as well as in those where no examination takes place, has the right to insist on its annulment if he thinks it is not new, and if he can prove it old it is annulled.

In England a patent which has several new points gets void if one of the points was old when the patent was applied for.

If an inventor and patent-holder expects such a writ of error, they can meet it with a disclaimer before it has been presented at court.

In England and France it is lost if the invention proves to be useless.

If the patent is not renewed in time in Canada, England, Italy, Luxemburg, Austria and Portugal it is lost.

It is lost if the inventor has not manufactured the article in the given times, as follows:

Belgium, within 1 year after the manufacture in another country.

Canada, within 2 years after receiving the patent.

Denmark, " 1 " " " "

Germany, " 3 " " " "

France, " 2 " " " "

Italy, " 1 " " " "

If the patent is of shorter duration than six years.

Italy, within 2 years after receiving the patent if it last six years and longer.

Luxemburg, within 2 years after receiving patent.

Norway, " 2 " " " "

Austria, " 1 " " " "

Portugal, within the first half of the duration of the patent, for invention patents.

Portugal, within 1 year after receiving the patent, for introduction patent.

Russia, within the first quarter of the duration of the patent.

Sweden, within 2 years after receiving the patent.

Spain, " 2 " " " "

In France and Canada, if the patent-holder and

his partners import the article into those countries, or if it is imported with their knowledge.

In Germany, if the state buys it for use in the army, fleet or for the public welfare, and in Portugal, if it is useful to the public.

CHAPTER VII.

WHEN IS AN INVENTOR ALLOWED TO MANUFACTURE AND SELL AN AR- TICLE FOR WHICH PATENT HAS BEEN APPLIED?

In all countries, with the exception of Denmark and Norway, as soon as he has sent all the manuscripts, drawings, etc., which refer to the invention to be patented, and are necessary to the attainment of a patent, also the tax which is required, to the magistrate.

In Denmark and Norway from the first day the patent is issued.

CHAPTER VIII.

THE VALUE OF A PATENT.

IT is very natural that every patentee thinks his patent will make him a millionaire. Many believe that some rich man has been waiting to offer him the money for the patent. A gentleman said he had invented a new electrical apparatus, and asked \$300,000 for the patent, and he would not even give evidence whether the apparatus was good or not. He thinks it is self-evident that *his* patent is the most useful in every way. Of course, nobody would give such an enormous price, and the consequence was that the patent was never manufactured, and in six months another man had invented something very much like it, and as he understood the business better, made lots of money. Much the same fate Dela Bastie had with the German glass manufacturers. He thought his hard glass method for Germany was worth ten million francs, and he asked one million for his invention. The result was that he was very artfully cheated out of his invention, and made little money with it in Germany. Such examples I could give by hundreds, and prove that through too much self-assurance and overrating the patent holder

destroys his patent. This is very hard to keep from overrating, for there are certain loose patent agents who tell the inventor that his patent will sell for any large sum, in order to get money out of him

To name a certain sum and say it is the value of a patent, is nearly impossible, as has often been proved, and the inventor can be certain that at the highest he gets only one-twentieth part of the value of his invention, and often only one-fiftieth of its value is offered him. If this strange circumstance is examined, it is generally found that it is the fault of a certain unbelief on the part of the buyer. For even with the best patent, he can never be sure whether he will lose or gain by buying it. This insecurity drives away most purchasers. If the patent is very enticing, it may find many who want to buy it, but the price is lowered a good deal on account of the distrust.

The first thing that is of great importance to the buyer is the manufacturing cost. If great sums are needful for this, it will make it very hard for the patent to be sold, as a view of great manufacturing costs always puts down the value of an invention. If this point is decided to the satisfaction of the buyer, his next thought is whether the article needs many advertisements or even traveling men. If it does, the price is again diminished, and so perhaps the inventor receives \$500 for it, while the buyer makes a profit of \$100,000. But what is a patent of this kind worth which the buyer pays \$500 for and makes \$100,000? I think that if the inventor would get 20 per cent. of this, making \$20,000, it is not too much. I am sure that my honored readers will

agree with me, and some, perhaps, say that the inventor ought to get still more. Still one must also think of the large capital which the buyer was obliged to use in order to make the patent profitable.

That inventors may not have bad luck, I would like to give them a system which I think is the most reliable, and most likely to give them a durable and good income out of their inventions. First, only let the patent for a certain royalty, and in the first year for a small one, perhaps 10 to 20 per cent. of the selling price of the article. In the second year, 20 to 25 per cent. of the selling price, etc. Besides, the buyer has to pay the inventor all the expenses of the patent, etc. From all these revenues the value of the patent comes all by itself.



CHAPTER IX.

THE KIND OF INVENTIONS THAT FIND GOOD SALE IN FOREIGN COUNTRIES.

ENGLAND—Machines of every kind, firing methods, transport ways of every kind, telegraph, steam cars, electricity, cotton industry, and others.

France—All the above mentioned, and besides notions, gloves, dress articles, shoes, artificial flowers, advertisement wagons, fancy articles, etc.

Italy may be regarded more as an agricultural than an industrial state. Of the patents granted in Italy, from 40 to 50 out of every 100 are from foreigners. Though there are patents of every kind, agricultural implements and mill works predominate, also articles for vineyards, wagons for wheat, baking ovens, and similar things are numerous, while all inventions that indicate higher culture are absent. Stoves for the heating of houses are not to be found, though they are quite necessary, and under the rubric "steam cars," we find more inventions for the cooling of the cars than for the warming.

Russia—Inventions in regard to the size of the territory are very good, for instance improvements

of steam cars and telegraphs, in the beet sugar line, the manipulating and making into soap of fats, agricultural implements, musical instruments, etc., bring good profits generally.

In Germany and Austria all good and useful United States inventions are easily sold, and at good profits.

Sweden and Norway are, for metallurgical processes, firing and wood-stuff manufactures, very recommendable.

Denmark is very advisable for nautical improvements, as well as advances in agriculture, raising of stock, and fishing.



CHAPTER X.

DIFFERENT POSSIBILITIES TO MAKE MONEY OUT OF PATENTS.

THE possibilities to make money out of patents are various, and mostly depend on the kind of patent. We have,

1. The selling of the patent for a special at one time payable selling price, to one or more persons or to a company. The buyer gets all rights and profits without any further sum.

2. The selling of a patent for a small sum (which in reality is but to cover the expenses of the patent and all that belongs to it and is regarded as such) and a royalty. This is also to one or more persons or a company.

3. The selling only for royalty to one or more persons or a company.

4. The selling of patent rights for some state, county or city, for a certain sum.

5. The selling of the patent right for certain cities, counties or states, on payment of a small sum and royalty.

6. Renting of the patent rights for certain cities, counties or states, for only a royalty.

7. One makes a certain number of the patent article and rents them. This is best done with machines which manufacture the whole or part of an article. So, for instance, the McKay sole sewing-machine was rented out to shoe factories, which had to pay a royalty for every pair of shoes sewed on the machine. The control was easy ; the owners giving the shoemakers stamps which they had to paste on every pair of shoes before they left the factory. In England they had a different method, having in each machine a dial which recorded the number of soles made, and the manufacturer had to pay a certain sum for every thousand. In Germany they hired it for a certain yearly rent. Later on they were sold for good prices, and now about 20,000 of them are in use.

From the above it will be seen how many different ways there are. It is always a very advisable way to sell or rent the patent for a royalty for every piece sold. It is easy to keep control with stamps which the inventor has made and which he sells, for the royalty to the buyer. For machines it is advisable to have little plates made with the stamp of the inventor, and to have these fastened on some part of the machine. To realize foreign patents the best way is to go, after having made good models and descriptions, to the land where you want to interest people. Of course, a knowledge of the language is very important, or an interpreter is necessary. In many cases one can correspond, but only for the contract making it is necessary to travel to the place. What can be done the following case clearly shows : Two inventors packed up a locomotive and brick ma-

chine and traveled to Germany where they even had not a patent. After a few days they had sold it for \$5600. Another example, which shows that it is best not to insist on a fixed price: A Frenchman had invented a new alligation of metals; he had a patent in France, and before he even had the patent in Germany, sent some one there who was to sell it for \$6000. Many would-be-buyers came. The alligation was tried and found good, but all were not anxious to pay \$6000. The Frenchman then said, "I do not care to have a royalty per pound on an interest. I want \$6000 and not less." But nobody came to buy it. Never persist on a fixed sum if you are anxious to sell. I advise all inventors to take what they can get and not to persist on a sum which is too high.

To realize patents which are only improvements of others, and which are invented by one not of that branch, it is not advisable to handle the patent yourself. The best way is to rent the patent to large manufactories and ask a certain royalty. If this is done a pretty profit can be realized.



CHAPTER XI.

IF AN INVENTOR WOULD SELL HIS PAT- ENT WHAT MUST HE THINK OF MOST?

WHEN he would like to sell his patent he must first make a model of it, that he can prove the invention is all he says it is, or all it ought to be. The inventor must not forget that any one whom he wants to interest in his invention is naturally a little mistrusting and that he needs evidence to assure him. An invention can look real nice on paper and be in reality very useless, therefore a model is very necessary. The next and nearly as important is an accurate and precise description, in which all the advantages and uses of the patent must be especially mentioned. The inventor cannot use enough care on this and the model, as they generally prompt the person to say yes or no. Only have no half models, no incomplete, half finished things, if it is possible, because the same thing can get an entirely different look if it is badly presented. All people look at such inventions quite differently from the inventor. Of course there are things of which no model can be made, which only exist on paper. In such cases it is best to interest people who can make arrangements for the introduction, and who understand the article. If the inventor would

act correctly, he must allow them to use his system free, for they introduce it and deserve a great deal. Let us think of the introduction of the sewing-machine into England. Nobody wanted to buy it, as it was very expensive at first. Not until many had been given away did it begin to flourish. "All beginnings are hard." This sentence is very correct if one talks of the introduction of new inventions. I would like to press the inventors to be very modest in their expectations at the beginning, so that they may find people who will take their invention to manufacture, introduce and bring to the market. When the patent is introduced the inventor can raise the royalty and ask a sum 20 to 50 times as high as at first. Those inventors who believe the whole world will run to them are greatly mistaken. When, at the beginning of 1870, Solway, the inventor of the soda-ammonia process, came to Frankfort-on-the-Main and invited the soda manufacturers to come and see him and he would explain it all to them, not one came, and he had believed they would think it a great honor.

Professor Morse, the inventor of the telegraph of the same name, tells us that when he was in Washington to see if he could not induce the government to have the telegraph line from Washington to Baltimore equipped with his patent, he had placed his instruments on both sides of the capitol to show the members of Congress how they worked. As he talked he saw that some, but very few, believed and liked his machines, but more looked at him distrustfully, while others even thought him a swindler. It was toward the end of the session and about 400

bills had to pass before his, so he went home with but fifty cents in his pocket, having spent all on the instruments. He had a very sleepless night, but next morning found that his bill had passed, and a new era founded in telegraph inventions.



CHAPTER XII.

HOW THE PATENTEE CAN FIND A PURCHASER.

(1) He must get himself copies of his patent from the Patent Office in Washington. (20 copies for \$2.00.)

(2) He must, if possible, make a model, perhaps smaller than the original, for even that shows the working and shape of the machine better than a drawing. But if a model is impossible, a good drawing which shows the whole of the invention must be made.

(3) The inventor must write an accurate description of the patent and all its uses and advantages, so that a buyer can see them without trouble.

(4) The inventor has to choose, out of the list of firms in the second part, those who can use his patent, and make his offer to them. Here I will warn the inventor again. Never, if a buyer comes, chase him away by persisting on a fixed price. Always be modest. Further, it is advisable not to sell smaller rights than state rights, and not to give them for royalty; for if city or county rights are given, the inventor has thousands of troubles to silence and will be continually at law.

CHAPTER XIII.

HOW MUCH PER CENT. IS THE AVERAGE ROYALTY?

The royalty that a manufacturer has to pay the patent holder or inventor for the manufacture is between 5 and 10 per cent. of the selling price. The per cent. is always in regard to the article manufactured. If it is a small thing and has to be made cheap, the per cent is smaller; in this case the quantity must bring the money. If it is an article which has a large selling price and no competition to be feared, 15 per cent. can easily be charged; even 20 per cent. has been given, but that is very seldom. It is for the interest of the patent holder not to ask too high a royalty, for he then, through that, compels the manufacturer to raise the selling price and that may hinder the selling a great deal.

How large a royalty can be asked is best seen by referring to the case of Bessemer, inventor of the Bessemer steel. He received from England and the United States a royalty of a few cents per pound of steel, made by his process, and his income was more than a million yearly.

CHAPTER XIV.

TO FIND A PARTNER.

I have often heard that when patentees seek money they say, "I will take a partner." I have also noticed that it is easy to find one, but I have seen that at the end the partnership was very often not as nice as it promised to be at the beginning. The cause of this we mostly find is the reason, that the partner, though he furnished the money, had no business talent, or did not care to attend to the business. Another cause is the unfriendliness of the partner to the patentee. The partners often think that their money is everything and they forget that the patent is the main part ; for without a patent no partner.

The patentees generally look for a partner with much capital, though he may have little business talent, while they would do better with one who had more talent and less capital. My experience has taught me that patentees have very little business talent, therefore they need a good and talented business partner.

In making agreements with a partner, I would advise the patentee to be careful and see that in case of a separation, the patents and inventions should

always fall back to the patentee and without any special compensation. Should the partner not agree to this, but want a payment, it is best to fix a sum in the agreement.

The best way to find a partner is to advertise in a newspaper; in large cities, also by going to agents.

The portion which the patentee can ask in partnership is between one fourth and one half of the profit; generally one third. In contracts where the partner receives a certain per cent. on his capital, before the profit is divided, the patentee always receives one half.



CHAPTER XV.

TO BORROW MONEY.

The patentee can borrow money easily from a bank or banker, if he is a well known business man. Besides this, the patentee can have money from private people if he mortgages his patent, or gives any other security. As the easiest way to find such private persons, I advise newspaper advertisements. Newspapers for this purpose are in the second part of this book. Besides this, he should offer higher per cents than usual, and should mention this in his advertisements. It is also advisable to offer the lender a small portion of the profits, thus making him a silent partner, which is very recommendable. If the patentee acts according to this plan, he will easily see all his wishes gratified.



CHAPTER XVI.

THE FOUNDING OF A STOCK COMPANY AND THE SELLING OF STOCKS.

If a larger capital is required for the manufacture of a patent, it is always best to found a stock company. For the foundation of a stock company the patentee unites himself with some gentlemen, thus forming a corporation, which must be entered in the state according to the law. The expenses of this act are very small. A good way to sell the stocks is to guarantee a certain per cent., especially for the first year. The stocks are easily sold if they are given to stock brokers, who of course charge extra for this work. Another good idea is to give the broker an interest in the company. Firms who sell stocks you will find in the second part, under Stock Brokers; and addresses of Stock Certificate Printers under Bonds and Certificates.

It is not advisable to found the company on too small a scale, in proportion to the patent. The inventor generally receives a royalty, his selling price in stocks mostly, and has an important position, like superintendent, director, etc.

How easy it often is to found a stock company for the manufacture of a patent, the following proves :

Several years ago a poor German chemist came to the United States. He had invented a new chemical process to make a certain chemical product out of other elements, and much cheaper than it had ever been done before. He found somebody who lent him, on his apparatus and books, for very high per cents (I believe 40), a certain sum of money. With this he had his invention patented. Then he went to a patent agent who said he would sell his patent. The poor inventor had to pay some twenty dollars in advance, but all without luck. He was in a very helpless state, without money, his books and invention mortgaged, knowing very little of the language and habits of America. At last he went to another man. This man, though a German also, had been in this country for some time and knew its language and ways. He promised to help. The inventor, after a few days, went again to the man's house where he found some other gentlemen, one a pretty good chemist. The inventor showed him the process and all was found to be right. They formed an association and sold their stocks easily, because they offered an interest of 14 per cent. the first year. At the beginning they had only enough to pay the corporation and printing expenses. But then they built and manufactured, and in a few years they all were rich.

I think such corporations are founded nearly every day and generally have success. The ground work and success depend entirely upon the value of the patent.

CHAPTER XVII.

WHAT IS THE BEST WAY TO INTRODUCE PATENTS?

IN answer to this question we must leave the firm ground of objective and step on the unsafe of subjective views. Out of this we can see that we can say nothing positive, and can only suggest a pattern for a frame which may be arranged to fit each picture. To divide the most plentiful material, even the least bit, we must separate it into two classes, in business patents and speculation patents. Under the first head we will understand such patents whose inventor is in some business, and can and will use it in his own store; or those that went into the hands of a business man for this reason or purpose. With the name of speculation patents we endow a great class of patents which are in the hands of neutral persons for selling, and those which are not yet in the hands of one who will make use of them.

We will turn at first to the business patents and remark right away that these must of course be good, useful patents.

The following rules, in which we will try to tell the business patent holder what he shall and what he shall not do, are only in regard to those which are useful.

1. "Try the invention thoroughly before thinking of bringing it to market for sale."

Too often it happens that a patent holder cannot wait, being in such a hurry that he publishes descriptions and uses of it while he is yet experimenting with it. If people wish to buy the article then, he must either tell them that it is not yet complete or he will sell it to them so and cheat them. Then it does not take long before all newspapers and other inventors commence abusing the patent. When the inventor then finishes the improvements on his article, and puts it before the public, it takes long before he can get anybody to believe him.

2. "Try to make the article as good and cheap as possible."

To be able to do both these things at once it is necessary in most cases to make as many of the articles as possible, and then find a place to dispose of them, and

3. "Seek to interest many people, in fact as many as possible, in it."

By giving high profits to agents, and putting your own profit as low as possible, is the soonest way to attain this result. It is better to make much, good and cheap, with little profit on each, than little, good and expensive, with high profit on each piece. For when much is manufactured at once it can be done more evenly and better, because the work can be divided.

4. "Use the press to advertise."

Through discussions in good papers you can interest many for the article, and through solid advertisements can support the sellers.

5. "If the worth and subject of the article allows you to have, (besides the agents and again sellers,) traveling agents, it is recommended to do so at the beginning. In all cases the inventor must send it to the exposition, as this helps more than is generally supposed. Going to speculation patents, we will mention the following as the best and most useful ways."

1. "Make the patented article first and not spend time and money to get people to interest themselves in an article which is only described on paper."

This is not only to be observed by transportable things but also by original treatments. As soon as you are able to show one perfect apparatus or certificates of the good this or that improvement did, you can sell or find good agents much sooner. If you can pay some money you should always lead your own invention, for nobody can make an article sell so good as the inventor himself.

2. "Bring the patent to market first in you own country, and then, supported by the good luck here, proceed with the foreign patents, if you have any."

On this little patience trial many inventions have already been wrecked. Most inventors, immediately after getting into possession of their patent, believe that everybody knows the patent as well as they. With great expectations they proclaim it in all countries, and as no recommendations are there, nobody will buy it. Little by little the inventor loses courage, and with it all his friends and helpers, who are discouraged, for all their assistance did no good. At last the whole thing is gone and the inventor has only

his paper patent, perhaps debts, and anger in his heart for his mistaken genius.

3. "Do not ask too high prices."

The wish of most inventors is to sell their patents fast and high priced. We cannot be angry at them for this. It is unnatural for the purchaser of a patent to buy it for all time, for who can guarantee that the inventor will not make a new improvement on it and then sell that to another. Besides this, nobody knows if an invention that is good to-day may be useless to-morrow, for a new invention may appear which is much better than the old one. The money paid would then be thrown away. I can advise the following and believe it would be perfectly just for both parties : "A small sum to be paid to the inventor for his trouble and expenses, and then a certain part of every article he sells. In short, all that was said in regard to business patents can be used here too, especially the use of the press and the sending to the exposition, to wake the interest and call the attention of the public to the new patent.



CHAPTER XVIII.

ABOUT ADVERTISEMENTS.

A FITTING advertisement is good for the best inventions, perhaps even necessary. Advertisements are a great ruling power now-a-days; the most extensive and most effective branch of papers for this purpose being the political dailies and weeklies. Insertions in the editorial columns are always better than among the advertisements. For really good inventions the newspapers print for nothing if you give them the fitting text and cuts. If the public in general should be interested, daily and weekly papers and periodicals are best. But if experts are to be attracted scientific and technical papers are to be preferred.

Besides newspapers there are many other ways of advertising, and I am sure every inventor will find the right way. One of the best advertisements of small articles was that of the blacking maker, Warren, in London. He had an advertisement written on the Egyptian pyramids, "Buy Warren's shoe blacking. It is the best in the world." Every body scolded on account of the profanation, but he was known now, and in a little while became a rich man.

A very good way of advertising is that of giving lectures to a chosen public, about the uses and advantages of the article.

Another good way is to send an article or a model of it to an exhibition. A bad side of this is, the great expense which sometimes can not even be paid by all the good the exhibition of the article does. If one sends an article to such an international exhibition the article must have international value if one would gain anything by sending it there ; also, the factory must be so located that the goods can be sent to all sections without trouble.

A small compensation for the trouble of sending to the exhibition is their premiums. Though they do not always have a good moral influence on the receiver, still they are good advertisements and are better than most others. Advertisements are to-day worth more than cash and generally must be bought with it. Large firms hate to be without their paper, on whose pages all their patents and premiums are mentioned, and they are right.

When we now look at the list of more or less solid and respectable helps which are in reach of the inventor and manufacturer, we see a whole system. Between the simple newspaper notice and the openly bestowed premium are hundreds of other ways to attract the attention of the public.

He who understands the whole art of advertising will always win, even if the article he sells is no better or of a worse kind than that of his competitor.

CHAPTER XIX.

A GRAND SUCCESS.

About twenty years ago there lived in Provence (France) a workman who liked to read very much. He possessed a library consisting mostly of old novels, which his master had given him. Because he loved them very much and hated to see them so dilapidated, he always thought of a binding and finally devised a self-binder. As it was very useful the pastor advised him to have it patented, which he did, as he had some money. But when he got the patent he did not have any money left to manufacture it. He went to his master who said, however, that the patent was a swindle. This was not very encouraging, but he went again to the pastor who told to put the following in the papers :

“ 1000 frs. are wanted for three years. High per cent. and great security given.”

Sure enough many people came, when he borrowed and commenced to manufacture. He employed a book-binder and with his help made a thousand of the self-binders. Then, as nobody bought them, he was obliged to send his help away. He took the

self-binders and went peddling trying to sell them, without luck. Then he thought of the advice of an old Jew whom he had met, to give his articles to a wholesale house for Article de Paris. He went there and offered them the thousand self-binders, but they would only keep them on sale and not buy them. He went from house to house with no better luck. At last he left them at one house and went home to work as before. He had made a contract with the firm that the net profit should be divided.

Not long did he stay on his farm. Already, after fourteen days, he received a letter containing 2000 francs and ordering many self-binders, also saying that they would pay cash. One order was quickly followed by another. He founded a book-binder shop, and later on a book bindery works with machine power. And out of this simple beginning, in a short time, arose one of the largest book-binding establishments in the world.



CHAPTER XX.

GOOD ADVICE.

The attentive reader of the foregoing will know the summary himself. We believe, however, that the advice which we intend to give here can not be given often enough to show the inventor, and especially him who has nothing to lose, on what a slippery pathway he is walking, as soon as he over-estimates himself and his invention, and does not know when to stop in his hunt for patents.

Inventions and patents are something like a game of hazard, only the public does not see so much of it. As by hazard playing not every body can prosper and keep on prospering, and if one does it is heralded into the world, we must not think of the many who go to their destruction at gambling tables; so it is with inventions. The few who have won respect and fortunes through them are countable, but those who through their patent and invention craze have nearly, if not entirely, destroyed themselves and their families, are countless.

I do not wish to warn people not to invent. I only want them not to patent carelessly, and ask to warn them against speculation-invention. Every one who seeks to improve and help science in any way

does nothing wrong as long as he does not get out of reasonable bounds. However, he who believes that he is a grand inventor and when he invents even the most invaluable thing and advertises it in every country, he is a systematic hazard player and ought to be stopped. I warn the small man, not to think his invention is the grandest on earth and worthy to be patented in every country. I also warn the rich inventor, who spends the national wealth in foreign lands because he patents his invention in every nation.

Money for which goods are bought in foreign lands is not wasted ; it does some if very little good ; but money which is spent on patents in foreign countries has no value to the nation at all. And how easy a patent gets void. As I once before mentioned, every foreign patent is declared void as soon as one of them is allowed to expire. In the same place it is mentioned that in some countries the patent must be manufactured after the expiration of a given length of time. Also, that sometimes a tax must be paid after the patent is granted or it is void. On account of these reasons not more than ten per cent. of all patents gain the age of five years, and not one per cent. live to mature age. Every inventor should well consider before he undertakes to apply for foreign patents, for they are too easily lost. Patents are not so easily taken care of as patentees and inventors at first suppose they are.

Where do those three rules work ?

In all countries except Germany the first one is enforced The second is in nearly every country ; also the third.

The inventor who, besides his American patent, has one in England, Belgium, Italy, Austria, France and Germany, if he now would let the English patent expire all the others except in Germany would be declared void.

Therefore try your patent first and find out whether it is really worth patenting in any other land. Then take only a few and in countries where they will be valuable. Find out what competent people think of it before you patent it.

Mostly there is no reason to apply too soon. Wait till you have one in your own country, and then if that sells good, try another. Only in very few cases and only with great inventions it is necessary to seek for all patents in quick succession. In other cases keep cool and never over-estimate.



CHAPTER XXI.

MODEL CONTRCTS.

No. I.

CONTRACT

between Mr. X (buyer) and Mr. Y (seller) in regard to the selling of Patent No. of on

§ 1.

Mr. Y. resigns with this his interest in sub No..... of , given patent to Mr. X under the below mentioned conditions, and allows the circumscription of the patent on the patent roll to Mr. X.

§ 2.

Mr. X pays Mr. Y, as payment for that under sub § 1 described patent:

1st. A sum of \$, payable in installments etc., the first installment payable immediately, the second on etc.

2nd. During the continuance of this agreement, only till the end of the patent however, a commission of per cent of net selling price of every sold patent apparatus (or of those amounts paid to Mr. X by a third party for the use of a patent treatment.)

The account will be settled every quarter (or half year) The money then due to Mr. Y is to be paid at the latest, on in cash.

For the control of the commission Mr. X will keep an account book, in which these things shall be entered. This book shall be at the disposal of Mr. Y, or his agent, every month, (or quarter.) Also, every patent article shall be marked with a continued number.

§ 3.

Mr. X is obliged, during the continuance of this contract, to do everything in his power to keep the patent going. Especially he shall be held to the payment of all the patent taxes punctually. If Mr. X should be careless and forget anything, through which carelessness the patent gets void, he shall pay Mr. Y a sum of \$

Mr. Y binds himself to help Mr. X, without charge, with his advice, as far as the arrangement of the factory and the use of the patented article or the sustenance of the patent is concerned. Mr. Y furthermore binds himself to give any possible improvement, that he may make to Mr. X free of charge, and the latter is obliged to see that those said improvements are protected by a patent.

(Here can be added a subject on the making of construction drawings, if the inventor can make them.)

§ 4.

The sum named in § 2 of per cent shall, from the beginning of the third (fourth) year, be \$ (not too high a sum), and shall then rise to \$

At the end of the year that the royalty does not reach this sum, Mr, X (buyer) may either give the contract, with all rights mentioned in § 3, back to Mr. Y (seller), without an indemnification, or he can raise the royalty to the said sum himself. Patent articles which Mr. X may have on hand or which are yet in manufacture, after the return of the patent to Mr. Y, may be finished and sold within the first three years, with the increase of 25 per cent. on the royalty, stated in § 2, on each article, (raised because patent tax is no more paid).

If the patent falls back to Mr. Y, he can do with it what he wants, and Mr. X is obliged to allow circumscription in case it is again sold.

§ 5.

In case of quarrels both parties are free to bring the case before a court of arbitration, in which case both sides must choose each two arbitrators and these one foreman. Their decision must be taken, however; or the case can be laid before the court nearest to Mr. X's residence.

§ 6.

This contract will be made in copies, and the contracting parties divide the cost equally between them.

Witnesses :

.....

.....

No II.

ARTICLES OF AGREEMENT.

These articles of agreement made and entered into this day of A. D., 18..., by and between Mr. X (seller) and Mr. Y (purchaser), both of the city of , Witness: Whereas, Mr. X is now the sole owner and proprietor of a patent and invention of a certain , known and patented under the name of and, Whereas Mr. Y is desirous to obtain exclusive right and privilege from the said Mr. X to manufacture and sell said , known as the “.....” Now therefore this agreement Witnesses:

That Mr. X, for and in consideration of the premises hereinafter mentioned, does hereby agree to sell and set over unto Mr. Y the exclusive right and privilege to manufacture said and the exclusive right and privilege to sell the same in the United States, and all foreign countries, dominions and states for the period of years from the date hereof, reserving to himself during that period the ownership of said patent only.

The said Mr. Y, for and in consideration of the premises herein contained agrees to manufacture and sell said , known as the “” during said period, and to use the utmost endeavor and vigilance in the manufacture and sale of the same, that his means will permit.

The said Mr. X, as and for his portion of the

capital stock, shall furnish the invention and any possible later invented improvements of said
....., known as “ ”; and the said Mr. Y shall furnish all the material, labor and capital required for the manufacture and sale of said
..... during the period above mentioned.

And it is further agreed and understood by and between the parties hereto, that all gains, profits and increase that shall come good or arise from or by means of the manufacture and sale of said shall be divided between them in even and equal portions, each to receive one half of said profit and gains, and that all losses that shall happen in and by said manufacture and sale thereof, by ill commodities, bad debts or otherwise, shall be borne and paid by the said Mr. Y alone.

And it is agreed by and between the said parties, that there shall be had and kept at all times during the period above mentioned, just, perfect and true books of account, wherein shall be entered and set down all money by him received, paid or expended in and about the manufacture and sale of said
....., as all goods, commodities and merchandise, by him or either of them bought, and all other matters and things whatsoever to the said business and management thereof in any wise belonging, which said books shall be used in common between said parties so that either of them may have access thereto without any hindrance or interruption of the other, and also, that the said Mr. Y, on the first day of each and every month during the continuance of the period aforesaid, shall yield, make and render to the said Mr. X, a true, just and perfect inventory

and account of all profits and increase by him made, and all things by him received, disbursed, done or suffered, and all losses by him sustained in the manufacture and sale as aforesaid, and at the time of rendering such account to-wit: On the first day of each month shall pay and deliver to the said Mr. X his just share of the profits made and received.

And it is further mutually agreed between the parties hereto, that in case of the death of the said Mr. X., the said Mr. Y. shall pay to the widow, heirs or representatives of the said Mr. X. from the time of the death of Mr. X. until the end of the period of years, per cent. of the gain and profits arising thenceforth from the sale and manufacture of the said , and in case of the death of said Mr. Y. during the period aforesaid, all rights and privileges to the manufacture and sale of said , herein vested in the said Mr. Y., shall revert to the said Mr. X.

And at the end of said period of years the said Mr. Y. shall make a true, just and final account of all things relating to said manufacture and sale of the , and in all things truly adjust and pay over to the said Mr. X. his share of the gains and profits as herein agreed.

And the said Mr. X. agrees that at the expiration of said term, or in case of the death of the said Mr. Y., or in case of the forfeiture by the said Mr. Y. of the rights and privileges herein granted to him by reason of any non-compliance with the agreement herein, he will buy of the said Mr. Y. his heirs, or representatives, all the material and stock remaining on hand belonging to and used in the manufacture

of said, and will pay therefor the cost price thereof.

It is further agreed that the said Mr. Y shall make due endeavor to purchase all necessary material at the cheapest prices obtainable, and that the said Mr. X have authority to purchase material for said manufacture of said if he can obtain the same at lower prices than the said Mr. Y shall procure them, and that the said Mr. Y, before purchasing such material shall first obtain the consent of the said Mr. X.

In witness whereof the said parties hereto have set their hands and seals this day of
A. D. 18.....

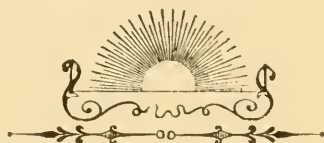
Mr. X.....

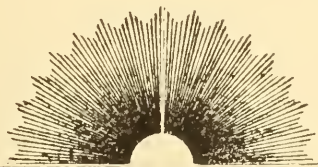
Mr. Y.

In presence of

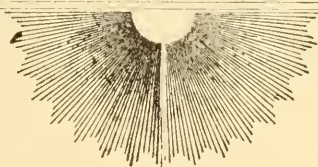
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.....





Part ❖ Second.







ADDRESSES.

AGENTS FOR MANUFACTURERS.

Montgomery, Ala : Warren & Holt
Little Rock, Ark : Colburn E. L.
Pine Pluff, Ark : Colburn E. L.
Parker & Atkinson
Denver, Colo : Johnson D. M. & Co
Kelly J. O.
Kimball & Handley
Morse E. E.
Robertson A.
Shandal T. J.
Thayer T. S.
Wood J. H.
Athens, Ga : Bloomfield R. L.
Chicago, Ill : Abbott, J. H. 25 Washington st
Brown W. C., 45 Lasalle
Buss & Norton, 414 Phoenix building
Caldwell Commission Co
Childs H. K. & Co, 221 5th av
Freeman A., 139 Lake
Gates H. F. & Co, 221 5th av
Gurney C. H. & Co, 247 Lake
Gustroff A., 92 Lasalle
Hawes A., 411 Phoenix building
Hinkley S. P., 45 Lasalle
Lewis G. F., 67 Washington
Mihills M. A., 89 Lake
Miles M. & Son, 138 Jackson
Munger H. H., 142 Lake
Reed G. W. & Co, 66 Wabash av
Rich F. A., 23 S. Canal
Smith F. W., 137 Lake
Smith S. A., 23 S. Canal
Stoner I., 19 Wabash av
Straus M. & Bro, 19 Wabash av

Taylor J. & Co, 221 5th av
 Washington L., 228 5th av
 Wells B. W., 107 Dearborn
 Williams G. F., 436 Rookery building
 Wynne J., 239 Jackson
 Ziesler I., 221 5th av
 Des Moines, Iowa: Johnson D. M.
 Louisville, Ky: Burrell F. R.
 Coleman T. C.
 Dick A. M.
 Fraukel H. U.
 Gardner C. H.
 Gividen B. T.
 Gooch T. C. jr
 Heelskamp J. G.
 Huber & Allison
 Moore S. T. & Co
 Osborn, Symmes & Co
 Pope S. S.
 Powell J. D.
 Rogers G. M.
 Stucky H. F.
 New Orleans, La: Anderson J. W., 129 Poydras
 Blanchard J. G., 17 Tchoupitoulas
 Bobb J. M., 55 Gravier
 Bowling N. & Co, 40 Magazine
 Burruss W. M., 80 Magazine
 Curtis D. M., 17 Tchoupitoulas
 Dennery T., 80 Customhouse
 Devan, Urquhart & Co, 72 Camp
 Evans Bros, 13 Perdido
 Gould & Hotter, Bank place
 Hampton J. T., 37 Natchez
 Hoffman & Fatjo, 71 Tchoupitoulas
 Howard G. W. & Co, 796 Magazine
 McClure & Ridpath, 73 Poydras
 Morphy A. E., 91 Magazine
 Parker A. A., 23 Camp
 Pring B. H., 188 Gravier
 Seymour W. D., 53 Gravier
 Thayer C. H. & Co, 54 Magazine
 Tupper Bros, 8 Union
 Walker F. & Co, 117 Tchoupitoulas
 Wolfe U., 65 Magazine
 Zeigler J. J., 57 Magazine
 Baltimore, Md: Adler H. M., 304 W Baltimore
 Blondheim S. S., 29 W Baltimore
 Doyle C. J., 14 W German

Baltimore, Md : Loane E. D., 12 N. Charles
 Marston L. W. & Co, Light c. German
 Patterson G. F. & Co, 217 E Fayette
 Ports J. W., 29 W Lombard
 Ward S. M., 12 N Charles
 Wolf M. W. & Co, 294 W German
 Wysham G. F., 16 W Lombard
 Detroit, Mich : Anspach & Simon, 147 Jefferson
 Atkinson & Pennewell, 131 Woodward
 Atterbury & Van Court, 82 Grisw'd
 Berkery J. S., 21 Buhl blk
 Bigelow & Gibbings, 153 Jefferson
 Cohen D., 32 Walker blk
 Cohen M., 32 Walker blk
 Dickey J. A., 25 Congress W.
 Emery R., 58 Griswold
 Huyette & McKay, 333 Lafayette av
 Kaeding W. C., 31 Monroe
 Middlebrook H. & Co, 91 Jefferson
 Ridgely R. B., 42 Woodbridge
 Swift Mfr.'s Agency, 47 Rowland
 Kansas City, Mo: Supply Am. Co, 416 Am. Bank bldg
 Clark W. E. & Bro. 610 Walnut
 DaCosta A. M., 126 N 6th
 Davenport L. M. & Co 107 Ex bldg
 Ganse T. D. 1416 W 11th
 Keefer H. A., 26 Gibraltar bldg
 Levy L. & J., 211 Alamo bldg
 Meacham H. S. 1228 W 11th
 Rice M., 605 Delaware
 St. Louis, Mo: Allison J. W., 205 Pine
 Alofs W. L., 707 Olive
 Arnheiter C. J., 707 Olive
 Bateson C. E. & Bro 825 Lucas av
 Bernstein M., 414 Washington av
 Cain P. R., 701 Washington av
 Clarkson J. H., 506 Olive
 Conroy Bro, 208 S 4th
 Conway J. H., 608 N 4th
 Dillenberg D., 500 N 2d
 Farrar B. G. & Co, 623 N Main
 Field W. B., 415 N 7th
 Fife C. R. 114 N 4th
 Forward C. J., 200 S Commercial
 Frazer W. O., 203 N 3d
 Gibson G. G., 310 N 7th
 Goodwin J. P., 516 N 3d
 Hazelton H., 619 N 4th

St. Louis, Mo : . . Holmes C. H. & Co, 520 Olive
 Howe J. C., 24 N 3d
 Jungk H., 113 Olive
 Kory M., 618 Washington av
 Ladd J. A., 203 N 2d
 Levy D., 604 Washington av
 McDonald R. E., 400 N 3d
 Milburn W., 214 Pine
 Pratt C. N., 624 Locust
 Rashcoe H., 219 Olive
 Schloss T. D., 220 Pine
 Shryock W. P. & Son, 414 Wash'n av
 Todd G. W., 608 N 4th
 Waterman H. D. & S. J., 612 N 3d
 Werner J. M., 509 N 6th
 Werner M., 509 N 6th
 West R. P., 413 Lucas av
 White T. C., 421 Olive
 Winslow W. A., 607 N 3d
 Woodsworth & Co, 218 N 4th

 Omaha, Neb:.....Mills, Rankin & Co, 315 Dodge
 Phelps A. A. & Co, 10 Bushman blk
 Ulrich & Stewart, 409 Paxton blk
 Welshans W. J., 311 S 16th

 New York City :.....Allen J. L. M., 22 Gold
 Anthony H. M., 100 Reade
 Aughiltree J. W., 56 Worth,
 Baldwin F., 33 South,
 Ball E. M. & Co, 49 Leonard
 Barbey G. H., 17 Platt
 Barton E. E., 27 South
 Bateson, Armstrong & Dowd 116 Franklin
 Beale & Co, 75 Worth
 Beardsley F. W., 173 Greenwich
 Bedell S. C., 108 Worth
 Bedford & Kellum, 280 Broadway
 Bishop A. J., 26 University Pl
 Black Foster Co, (Ltd) 279 Church
 Bradenburg C. W., 125 Chambers
 Breinig G. M., 240 Pearl
 Brewster F. C., 56 Worth
 Briggs & Co, 318 Broadway
 Burnhans R. O., 121 Leonard
 Burling W. C., 216 Church
 Burnham E. S., 84 W Broadway
 Bush M. L., 7 Murray
 Capen R. S., 795 Broadway

New York City : . . Carhart F., 113 Worth
 Carpenter S. S., 51 Leonard
 Chalmers H., 335 Broadway
 Champlin C., 22 Platt
 Chesebro & Garnsey, 264 Canal
 Christensen Rudolph, 90 Chambers
 Christie A., 28 White
 Clark J. H., 401 Broadway
 Clarke A. H., 84 w Broadway
 Clark W. C., 280 Broadway
 Coffey H. Y., 22 Thomas
 Coles J. E. & Co 43 Jay
 Conover C. E. Co, 101 Franklin
 Cooper G., 98 Fulton
 Croghan L. A., 107 Franklin
 Culin C. G., 99 Franklin
 Cumming & Becker, 275 Church
 Damerel G., 18 Cortlandt
 Dana R. H. & Co, 25 Beaver
 Davie H. B.s, 115 Worth
 Davison H. C., 229 Broadway
 Day E. T., 192 Broadway
 Day J. F., 125 Chambers
 Dodman W., 107 Chambers
 Domeyer F., 376 Canal
 Donnelly D. A., 122 Duane
 Dowd P. A. & Co, 239 Broadway
 Eckmeyer & Co, 42 Beaver
 Farquhar N. & Co, 24 State
 Felch F. W., 51 Leonard
 Fenton D. W., 163 Maiden lane
 Ferguson A. S. & Co, 7 Park place
 Ferguson J. B., 115 Worth
 Field & Wagener, 115 Worth
 Foerster W. & Co, 137 Duane
 Foreign Trades Agency (Ltd), 128 Pearl
 Francklyn R. & Co, 5 S William
 Fraser C. A., 178 Broadway
 Friedman J., 48 Murray
 Froment Frank L., (Iron), 112 John
 Fry G. W. 39 Barclay
 Gay John F., 7 & 9 W Broadway
 Geriken H. J., 115 Broadway
 Gordon F. P., 140 Nassau
 Gordon J. E., 39 Barclay
 Graff A. M., 99 Franklin
 Graffin A. J., 56 Worth
 Graffin C. W., 56 Worth

New York City :.....Graham J. H. 113 Chambers
 Greene J. R., 18 Cortlandt
 Griswold M. W., 27 Beekman
 Guild A., 56 Worth
 Guthrie B. W., 1285 Broadway
 Guyon C. F. & Co, 99 Reade
 Haager J., 24 State
 Haight A. S., 119 Franklin
 Hall G. W., 115 Broadway
 Hall J. D., 176 Broadway
 Halpin J. J., 83 Chambers
 Hammond H. D., 51 Leonard
 Harrington A. W., 69 Duane
 Harton T. A. E Co, 84 Franklin
 Harwood W. B., 23 Murray
 Haslam & Hanks, 99 Franklin
 Haswell H., 99 Nassau
 Hauschild & Esche 335 Broadway
 Hawthorn & Co, 12 Courtlandt
 Haydock J., 332 Broadway
 Heller R. M., 216 Church
 Hendrickson I. C., 237 Broadway
 Heuacker J. E. 67 Barclay
 Herzog T., 79 Leonard
 Hicks Bros, 42 White
 Hinman Bros, 359 Broadway
 Hitchcock J. F., 297 Broadway
 Höckmeyer Bros, 116 Franklin
 Holden H., 513 Broadway
 Holton E. C., 771 Broadway
 Hughes G. F., 51 Leonard
 Hurst J. N., 115 Worth
 Hyde G. H., 712 Broadway
 Hyer & Co, 335 Broadway
 Hymes D., 118 Chambers
 Jacoby C., 554 Broadway
 Jenkins J. G., 8 Thomas
 Jennings H. D., 34 Thomas
 Judd F. F., 235 Greenwich
 Kautsky K., 251 Broadway
 Keep J. M., 183 Greenwich
 Ketcham E., 103 Maiden lane
 Klug F., 460 Broome
 Kunz H., 122 Duane
 Kutnow G., 658 Broadway
 Lang O., 115 Worth
 Lautenbach S., 323 Church
 Lavendol E., 99 Franklin

New York City : . . Lebel & Fisk, 4 College pl.
 Levene & Co, 53 Franklin
 Libbey B. E., 117 Waverly pl
 Lord J. B., 115 Worth
 Lyons A., 36 Maiden lane
 McClain & Talbot, 110 Worth
 McCoy H. E., 56 Worth
 McCrea J. E., 316 Church
 McCreery W. A., 99 Franklin
 McKean J., 86 Leonard
 Macpherson I. R., 401 Broadway
 Maduro S., 63 Murray
 Maginnis W. H., 115 Worth
 Mallory H. L., 107 Franklin
 Mather J. W., 56 Worth
 Meeks W. F. & Co, 9 Murray
 Merritt G., 94 Liberty
 Milliken T. K., 61 Leonard
 Muehsam A., 13 w Broadway
 Nock G. F., 176 Fulton
 Norris W. K., 280 Broadway
 Odell C. H., 15 Broad
 Otensen C. G. C., 159 Chambers
 Otto R. & Co, 102 Chambers
 Phipps N. L., 56 Worth
 Pittman W. R., 115 Worth
 Price E. W., 17 Platt
 Raborg H. M., 88 Leonard
 Rintoul J., 173 Greenwich
 Robbins R. A., 141 Chambers
 Robinson B. F., 51 Leonard
 Roch L. G., 867 Broadway
 Roeder George, 319 Broadway
 Rogers H. D. & Co, 75 Maiden lane
 Roraback J. O., 335 Broadway
 Ross A., 335 Broadway
 Ryan T. J. & E., 343 Broadway
 Sanders H., 51 Leonard
 Schnarr & Delius, 115 Worth
 Scott W., 157 Broadway
 Sealey A. A., 20 Nassau
 Senior T. H., 57 Beekman
 Shernian J., 296 Broadway
 Silver J. S., 13 Barclay
 Simmons W. A. & Co, 13 Barclay
 Skirving W. B., 37 Beaver
 Smith A. A., 86 Reade
 Smith C. A., 409 Broadway

New York City: . . Smith G. V., 104 Reade
 Smith & Scherr, 99 Franklin
 Smyth J. D., 335 Broadway
 Snyder A. H. & Son, 70 Worth
 Thatcher E. C., 150 Nassau
 Thayer F. P. & Son, 18 Warren
 Thompson R., 105 Chambers
 Thorpe J., 5 Beekman
 Tinagero J. F. & Co, 12 Old st
 Tollett E. A., 176 Broadway
 Tommins & Adams, 116 Chambers
 Umphred Bros & Ferguson, 2314 2d av
 Unger H. J., 115 Worth
 Valentine & Flagler, 99 Franklin
 Vanderbilt and Reynolds, 7 Lispenard
 Vorhauer W., 29 Murray
 Wade O., 71 Broadway
 Wakefield W. L., 77 Franklin
 Wallach W., 231 Broadway
 Webster C., 57 Leonard
 Weir J. D. & Co, 78 Franklin
 White T. C., 103 Chambers
 Whitney A. R. & Co, 17 Broadway
 Whitley & West, 323 Broadway
 Whitney D. J., 47 Warren
 Wilde C. E., 253 Church
 Wiley M., 49 Lispenard
 Willard W. A., 33 Chambers
 Wilson & Bradbury, 95 Franklin
 Winnant J. J., Jr. 32 Thomas
 Wootton C. W., 99 Franklin
 Wright S., Jr. 20 Lispenard
 Zerfass C. E., 39 E 14th

Cincinnati, O:..... ..Chapin D. B., 4 w 2d
 Cooke D. McK & Co, 49 w 2d
 DeRuiter W. & Co, 15 w 2d
 Durrell Bros, 25 w Pearl
 Evans & Robertson, Chamber of Commerce building
 Fullerton G. W. & Co, 8th c Sycamore
 Goshorn A. O., 7 Hammond building
 Hume & Beahr, 228 w 4th
 Johnston Bros, 264 w 4th
 Liebenstein L. K. & Co, 162 w 3d
 Males H. W. & Co, 99 w 4th
 Mendenhall D., 187 w 4th
 Pollock & Co, 322 Main

Cincinnati, O: . . . Putnam, Hooker & Co, 52 w. 2d
 Richardson H. M. & Co, 8 w. Pearl
 Walter H. H., 107 w. 2d
 Wessel, A. 53 w. 2d
 White A. & Co, Pike's building
 Cleveland, O: Billow E. E. & Co., 158 Public square
 Carlise M. W., 130 Water
 Kennedy W. D. & Co, 122 Water
 G. B. Johnson, 121 Superior
 Patterson & Co, 45 Euclid av
 George G. Wells, 89 St. Clair
 Dayton, O: Bates W. L.
 Lima, O: Moore Brothers
 Philadelphia, Pa: . Aaron S. R., 610 Arch
 Adams G., 1020 Chestnut
 Berry H. A., 20 n. 7th
 Bierce C. E., 1020 Chestnut
 Brooks A. G., 619 Walnut
 Brown T. H., 700 Arch
 Bush C., (Iron), Drexel Bldg
 Cake B. F., 69 N Front
 Clayton T. H., 831 Arch
 Clift & Wilcox, 1020 Chestnut
 W. W. Commins, 1017 Chestnut
 Crawford, W. K., 905 Market
 Crowell C. S., 707 Market
 DaCosta H. R., 833 Arch
 Davis C. S., 114 S. 6th
 DeCasseres Elias G. 222 Market
 DeCosta H. R. 833 Arch
 Dennis G. W., 15 S. 9th
 Douglass C. C., 710 Sansom
 Ennis C. H., 1020 Chestnut
 Fawcett T., 35 Strawberry
 Gay L. S., 64 N 4th
 Gratz E., 236 Chestnut
 Haverstick A., 700 Arch
 Henry G. H., 236 Chestnut
 Hinman C. C., 407 Walnut
 Hofheimer M., 610 Arch
 Hopkins & Small, 206 S. 5th
 Jackson, Slaymaker & Co, 727 Market
 Jenkins, W. R., 1020 Chestnut
 Kyle J., 109 Front
 Lamotte T. A. 415 Commerce
 Levy A., 729 Market
 Loomis C. H., 1020 Chestnut
 Loomis K. II, 430 Walnut

Philadelphia, Pa: McDonnell, C. A., 905 Market
 Markley, T. W., 15 S. 9th
 Merrill, V., 149 N. 3rd
 Middleton A. H., 24 N. Front
 Miller W. H., 503 Arch
 Mohr J. N., Bullitt Building
 Newsome T., 41 Strawberry
 Ottey E. H., 1002 Chestnut
 Phillips F. R., 407 Walnut
 Pollock A., 732 Arch
 Raser, S. S., 512 Commerce
 Reuben, S. R., 610 Arch
 Sheetz & Stephen, Drexel Building
 Silberman M., 831 Arch
 Simpson, H., Jr., 833 Arch
 Smethurst W. A., 7 Bank
 Storer G. W., 149 N. 3d
 Smith C. W. R., 55 S. 3d
 Stern M., 1345 Arch
 Swift J. S., 1020 Chestnut
 Taylor W. G., 37 S. Front
 Thomas, E. H., Bainbridge st. wharf
 Tilton W. H., 1023 Market
 Walker & Kepler, 108 S. 4th
 Walnut T. H., 502 Market
 Weatherly W. L., 214 Church
 Wilcox H. A., 1020 Chestnut
 Wilson S. W., 119 S. 4th
 Yerkes S., 622 Chestnut
 Pittsburg, Pa: Beggs H. C., 801 Liberty av
 Black H. M. & Co., 821 Penn av
 Camp H. E., 901 Liberty av
 Carter, Macy & Co., Penn bldg
 Colville W. W., 811 Hamilton bldg
 Dalzell A. F., Penn bldg
 Davis H. H., 99 Water
 Davis E. & J., 115 Water
 Deardorff I. L., 702 Penn bldg
 De Noon Bros. & Ewing, 5 7th av
 Forner W. F., 5 7th av
 Gwen J. M., 59 9th
 Kirby J. M., (dry goods, notions), 15 7th av
 McLean A. C., 52 9th
 Magnus J. W., 2 Jackson bldg
 Messing & Co., 20 5th av
 Overend J. W. (notions), 543 Wood
 Price W. P., 137 1st av
 Sellers F. & Co., 615 Penn bldg

Pittsburg, Pa :.....Stuart & Corse (dry goods, etc.), 36 6th
 Swearingen C., 58 9th
 Thirtle J., (boots & shoes), 533 Smithfield
 Chattanooga, Tenn : Martendale & Acosta
 Galveston, Tex :...Hennessey P. H. & Co
 Hughes W. J. & Co
 Milwaukee, Wis : Cohen Alex, 587 Jackson St

ARMS.

Los Angeles, Cal : Tufts-Lyons Arms Co
 San Francisco, Cal : Jones, McCracken & Co
 Denver, Col :Hilter & Reedman
 Lower J. P. & Sons
 Hartford, Conn : Colt's Pat. Fire Arms Mfg Co
 The Billings & Spencer Co
 The Gatling Gun Co
 Meriden, Conn : Parker Bros
 New Haven, Conn : N. D. Folsom & Co
 Marlin Fire Arms Co
 Strong Fire Arms Co
 Winchester Repeating Arms Co
 Norwich, Conn : Bacon Arms Co
 Hopkins & Allen Mfg Co
 Chicago, Ill :.....Grimm-Rudolf
 Graff & Jordan
 Chicago Gun & Cuttlery Co
 Jenny & Graham Gun Co
 New Orleans, La : H. & D. Folsom Arms Co
 Boston, Mass :...John P. Lovell Arms Co
 Worcester, Mass : Foreand & Wadsworth
 Harrington and Richardson Arms Co
 St. Louis, Mo :.....E. C. Meacham Arms Co
 Omaha, Neb :.....The Collins Gun Co
 Manchester, N. H : Killey & Wadleigh
 Jersey City, N. J : Star Pistol Co
 Buffalo, N. Y : ... Buffalo Arms Co
 Cortland N. Y :...F. A. Bickford & Co
 Ilion, N. Y :..... E. Remington & Sons
 Ithaca, N. Y :.....Baker, McIntyre & Van Natta
 New York City :...Alford & Berkele Co
 Merwin, Hurlburt & Co
 C. E. Overbaugh & Co
 Pneum. Dynamite Gun Co
 Wiebuck & Hilger
 Rochester, N. Y : W. D. Chapman, Sons & Co
 Syracuse, N. Y : Lefever Arms Co
 Syracuse Forging & Gun Co
 Cincinnati, O :...Brande Arms Co

Cincinnati, O :....B. Kittridge Arms Co
 Clark, Widdifield & Co
 Cleveland, O :The Chamberlin Cartridge Co
 Hummel's Wharf, Pa : Baum & Co
 Nazareth, Pa :H. James & Sons
 Philadelphia, Pa. : The Foehl & Weeks Fire Arms Mfg Co
 E. K. Tryon, Jr. & Co
 Milwaukee, Wis. : J. Meunier Gun Co

BARBERS' AND DENTISTS' CHAIRS.

Chicago, Ill:.....Hornung Mfg Co
 St. Louis, Mo:.....Koken Barbers' Supply Co
 New York City:...Klingler S., 30 S. 5th av
 Schwaab Adam
 Rochester, N. Y :...Archer Mfg Co
 Canton, O :.....Canton Dental & Surgical Chair Co
 Cincinnati, O :...Berninghaus Eugene

BICYCLES AND TRICYCLES.

Hartford, Conn :...Weed Sewing Machine Co
 Chicago, Ill:.....Pierre Geo. N., & Co
 Pope Mfg Co
 Western Wheel Works
 Boston, Mass :.....Wm. Read & Sons
 St. Louis, Mo :... St. Louis Wheel Co
 Knight Cycle Co
 Newark, N. J. :... H. B. Smith Machine Co
 Philadelphia, Pa: Strong & Green Cycle Co
 Sweeting Cycle Co

BILLIARD TABLE MANUFACTURERS.

San Francisco, Cal: Brunswicke Billiard Table Manf. Co
 Chicago, Ill:.....The Brunswick, Balke Collender Co
 Boston, Mass :....Came J. E. & Co
 Detroit, Mich:.....The Schulenburg Manfg Co
 New York City....Griffith Wm. H. & Co
 Cincinnati, O :....National Billiard Manfg Co

BITTERS MANUFACTURERS.

San Francisco, Cal : Ruther & Bendixon
 Sherwood & Sherwood
 St. Louis, Mo :....Home Manfg Co
 Louisville, Ky :...Green N. & Co
 New York City.....Balfe & Co

BLACKING MANUFACTURERS.

Boston, Mass :....Brown B. F. & Co
 Cahill M. S. & Co

New York City.....Bixby S. M. & Co
Philadelphia, Pa : Porpoisine Mnfg Co

BOAT BUILDERS.

Wilmington, Del : Bannar & Munn
Drein T. & Son
Chicago, Ill :.....Kane, Thomas & Son
Detroit, Mich :.....Campan S.
Jersey City, N. J : Hofmeyer C. G.
Brooklyn, N. Y :...Ayers Sam
New York City.....Glore Andrew & Son
Hayes E. A.
Peekskill, N. Y :...Osborn Wm. R.
Troy, N. Y :.....Waters S. & Sons

BOILER MAKERS.

Sacramento, Cal : Sacramento Boiler and Iron Works
San Francisco, Cal : Risdon Iron and Locomotive Works
Denver, Col :.....Star Boiler and Sheet Iron Works
Waterbury, Conn: Waterbury Steam Boiler Works
Chicago, Ill :.....Hazleton Tripod Boiler Co
Fort Wayne, Ind : Bass Foundry and Machine Works
Baltimore, Md :...Poole Robt. & Son Co
Worcester, Mass : Worcester Boiler Works
Minneapolis, Minn : Minneapolis Boiler Co
St Paul, Minn :...Northwestern Boiler Works
St. Louis, Mo :.....Rohan Bros. Iron Works
Albany, N. Y :.....Ferguson Boiler Co
Buffalo, N. Y :.....Lake Erie Boiler Works
Cincinnati, O :.....The Tudor Boiler Manfg Co
Philadelphia, Pa : Harrison Safety Boiler Works
Pittsburgh, Pa :...Lappan James & Co

BOND AND BLANK CERTIFICATES.

Boston, Mass :..... Heliotype Printing Co
New York City... American Bank Note Co

BRASS WORKS.

San Francisco Cal : Roylaure I.
Denver, Col :.....Denver Brass Works
Waterbury, Conn: The Plume & Atwood Mfg Co
Belleville, Ill :.....Jones Jam. Mfg Co
Chicago, Ill :.....Chicago Brass Works
Crane Bros. Mfg Co
Louisville, Ky :... Eagle Brass Works
Novelty Brass Foundry
Boston, Mass :..... Edson Mfg Co
Foster Wm. T. & Co

Detroit, Mich :.....Detroit Sheet Metal & Brass Works
 Galvin Brass & Iron Works
 St. Paul, Minn :...Northwestern Copper & Brass Works
 St. Louis, Mo :.....Central Union Brass Co
 Brooklyn, N. Y :.. Lewis & Fowler Mfg Co
 New York City :...Palmenbergs I R, & Sons
 Power Maurice J
 Cincinnati, O :.....Lunkenheimer Brass Mfg Co
 Cleveland, O ;..... American Bronze Works
 Philadelphia, Pa :..Bureau Bros
 Perkers Chas
 Pittsburg, Pa :..... Carbon Bronze Co

CAR BUILDERS.

Oakland, Cal :..... Burnham, Standeford & Co
 San Francisco, Cal : Carter Bros
 Bridgeport, Conn ; Rolling Stock Co
 Wilmington, Del : Delaware Car works
 Jacksonville, Fla : Jacksonville Car Comp
 Chicago, Ill :.....Arms' Palace Horse Car Co
 Canda Cattle Car Co
 Terre Haute Car Mfg Co
 The U. St. Rolling Stock Co
 Pullman, Ill :..... The Pullman Car Comp
 Portland, Me :.....Portland Co
 Detroit, Mich :.....Michigan Car Co
 St. Louis, Mo :..... Brownell & Wright Car Co
 St. Louis Car Comp
 Brooklyn, N. Y :.. Lewis & Fowler Mfg Co
 New York City :.. The Harlan & Hollingsworth Co
 The Iron Car Comp
 Stephenson John, Comp
 Union Palace Car Co
 Wagner Palace Car Co
 Woodruff Sleeping & Parlor Car Co
 Troy, N. Y :.....Gilbert Car Manfg Co
 Philadelphia, Pa : The Allison Manfg Co

CARRIAGE AND WAGON MANUFACTURERS.

Montgomery, Ala : Montgomery Carriage Works
 San Francisco, Cal :..Sanborn A. W., & Co
 Whaff & Dudley
 Denver, Col :.....Butler, Wyman & Atwood
 The Robertson & Doll Carriage Co
 Woeber Bro. Carriage Co
 New Haven Conn :..Cruttenden & Co
 Hooker Henry, & Co
 New Haven Carriage Co

Chicago, Ill :..... Edwards H. J., & Sons
 Staver H. C., Mfg Co
 Weber Wagon Co
 South Bend, Ind : Studebaker Bros Manfg Co
 Davenport, Iowa : Lamp P. & Co
 Topeka, Kansas : Walter J. W. & Son
 Louisville, Ky :... Ruby Carriage Manfg Co
 New Orleans, La : Garland & Kaler
 Portland, Me :..... Martin Plennell & Co
 Baltimore, Md :... Kunkel John N. & Co
 Boston, Mass :..... Colman Moses & Son
 French Fred. F. & Co
 Hall James & Son
 Nichols, D. P. & Co
 Sargent Francis & Co
 Detroit, Mich :..... Columbus Buggy Co
 Minneapolis, Minn : Moline Milburn & Stoddard Co
 Northwestern Impl. and Wagon Co
 Smith Wagon and Implement Co
 St. Paul, Minn : .. Northwestern Wagon and Carriane Co
 St. Paul Carriage Co
 St. Paul Park Carriage Co
 St. Louis, Mo :..... Haydock Brothers
 Moon Brothers
 Schelp Wagon and Carriage Co
 Omaha, Neb :..... Novelty Carriage Works
 Newark, N. J :..... Colyer J., & Co
 Kelly & Co
 Qumby J. M., & Co
 Allen & Smith
 Albany, N. Y :..... Standard Wagon Co
 Brooklyn, N. Y :.. Bungarz Stage and Wagon Works
 Buffalo, N. Y :..... Strasser Wagon Works
 Newbury, N. Y :.. Bazzoni L. J.
 Few York City :.. Babcock H. H., Co
 Borrho Jacob
 Bradley & Co
 Demarest A. T., & Co
 Lowdon & Rutherford
 Fifth Wheel Co
 Poughkeepsie, N. Y : Reed & Dorland
 Rochester, N. Y :.. Cunningham James, & Son
 Syracuse, N. Y :.. Whitney Wagon Works
 Troy, N. Y :..... Troy Carriage Works
 Durham, N. C : Durham Carriage Works
 Cincinnati, O :..... Enterprise Carriage Mfg Co
 Favorite Carriage Co
 Lippelmann Carriage Co

Cincinnati, O :.....Miller's Geo. C., & Sons
 Overman Carriage Co
 Cleveland, O :.....Cleveland & Brooklyn Carriage & Wagon
 Works
 Allegheny, Pa :... West E., & Sons
 Philadelphia, Pa: Braithwait R. M., & Co
 Caffrey Chas. S. Co
 Hunt William, & Son
 Rogers William D., Sons & Co
 Union Hub, Spoke and Wheel Co
 Pittsburg, Pa :.....Glesencamp L., & Son
 Knoxville, Tenn :..Knoxville Buggy Works
 Knoxville Carriage Factory
 Nashville, Tenn :..Cherry, Morrow & Co
 Dallas Tex :..... East Dallas Mfg Works
 Salt Lake City, Utah :..People's Implement Co
 Richmond, Va :... McDonough J., & Co
 Milwaukee, Wis :..Brown T. H., & Co
 Milwaukee Buggy Co
 Racine, Wis :.....Fish Brothers
 Racine Wagon and Carriage Co

CHEMICAL WORKS.

San Francisco, Cal: California Chemical Works
 Pacific " "
 San Francisco " "
 Western Mineral Co
 Denver, Colo :.....Colorado Chemical Works
 Bridgeport, Conn : Fairfield Chemical Works
 Glenbrook, Conn : The C. H. Phillips Co
 Hartford, Conn : Beach & Co
 Sisson T. & Co
 Louisville, Ky :...Struss Chemical Works
 Baltimore, Md :...Lazaretto Chemical Works
 Miller H. S. & Co
 Monumental Chemical Co
 Boston, Mass :.....Egyptian Chemical Co
 Enterprise Chemical Co
 Detroit, Mich :...Parke Davis & Co
 St. Louis, Mo :...Alff Chas. Chemical Works
 Davy Chemical Works
 Herf & Fredricks Chemical Works
 Jersey City, N. J : Tartar Chemical Works
 Newark, N. J :.....Hanson, Van Winkle & Co
 King Chemical Works
 Technical Chemical Works
 Albany, N. Y :...Albany Chemical Works
 New York City :..American Chemical Works

Atlantic Chemical Co
 Borgenport Chemical Co
 Crown Chemical Works
 New York Organic Chemical Works
 Passaic Chemical Works
 Union Chemical Works
 The Zucker & Levett Chemical Co
 Cincinnati, O :..... Berghausen Chemical Co
 Central Chemical and Manufacturing Co
 The Merrell Chemical Co
 Cleveland, O :..... Rosenwasser Laboratory
 Standard Chemical Co
 Chester, Pa :..... Geo. S Coyne
 Philadelphia, Pa : Pennsylvania Chemical Works
 Providence, R. I. Rumford Chemical Works
 Richmond, Va :... Richmond Chemical Works

ELECTRICAL INSTRUMENTS.

(See also Machines.)

Los Angeles, Cal : Los Angeles Electrical Works
 Sacramento, Cal : Pacific Electrical Works
 San Diego, Cal : San Diego Electrical Works
 San Francisco, Cal : Cal. Electric Light Co
 Cal. Electric Works
 Electrical Supply Co
 Hatteroth & Russ
 Ansonia, Conn : . The Electric Supply Co
 Bridgeport, Conn : . New England Electric Supply Co
 Star Electric Co
 Hartford, Conn : . Billings & Spencer Co
 Standard Electric Co
 Waterhouse Electric & Mnfgr Co
 Manchester, Conn: Mather Electric Co
 Middleton, Conn: Schuyler Electric Co
 New Haven, Conn: H. B Cox Electric Co
 Elm City Electric Co
 G. H. Simmons
 Torrington, Conn: Union Hardware Co
 Waterbury, Conn: Connecticut Electric Co
 Electr. Appliance Mfg. Co
 Standard Electric Time Co
 Woolworth & White Co
 Windsor, Conn: . Eddy Electric Mfg. Co
 Washington, D. C. J. U. Burket
 Washington, D C : J. H. Kuehling
 G. C. Maynard
 Royce & Marean

Atlanta, Ga : . . . Cole, Gentry & Co
 Chicago, Ill : . . . American Electric Meter Co
 J. Annussen
 P. Atkinson
 Automat. Temp. Regulating Co
 F. Bain
 L. S. Baldwin & Co
 Belding Motor & Mfg. Co
 Bidwell Electric Rasha & Mfg. Co
 Central Electric Co
 Chicago Electric Service Co
 E. Chiles
 H. P. Comstock
 Cowl & Van Denburgh
 G. Cutter
 Daft Electric Co
 Darche Electric Co
 Electric Mfg. Co
 Electric Protection Supply Co
 Electric Construction Co
 The Electric Supply Co
 Electro-Optic Mfg. Co
 Faraday Carbon Co
 Chicago, Ill : . . . Fowler & Co
 Franklin Electric Co
 J. W. Glass & Co
 E. E. Harbert & Co
 G. A. Harmount
 E. Hoefler
 Ill. Angle Am. Storage Battery Co
 Knapp Electrical Works
 J. Lang & Co
 McIntosh Battery & Optical Co
 H. Newgard
 Nutting Electric Mfg. Co
 J. D. O'Neil
 The Owen Electr. Belt & Appliance Co
 Pumpelly Stor. Bat. & Electr. Motor Co
 Sanden Electric Co
 Sprague Electric Equipment Co
 Standard Underground Cable Co
 Western Electric Co
 Rockford, Ill : . . . Rockford Electric Mfg. Co
 Fort Wayne, Ind : . . Star Iron Tower Co
 Richmond, Ind : . . Home Electric Appliance Co
 Terre Haute, Ind : . . Electrical Mfg. Co
 Davenport, Iowa : . . Hawkeye Electric Mfg. Co

Des Moines, Iowa : Hess Electrical Co
 F. H. Waiting & Co
 Dubuque, Iowa : . Dubuque Electric Works
 Topeka, Kansas : . Kansas Electric Co
 Louisville, Ky : . Standard Electric Co
 Gaynor Electric Co
 American Semaphore Co
 Baltimore, Md : . . Automatic Switch Co
 J. A. Barret Battery Co
 Marr Construction Co
 Maryland Electric Motor Co
 The Pope Electric Co
 Southern Electric Co
 Attleboro, Mass : . Smith Electric Co
 Boston, Mass : . . American Electric Register Co
 American Magnetic Electric Co
 Automatic Electric Service Co
 Boston Electric Co
 Campbell Electrical Supply Co
 Connelly Electric Heat Regulator Co
 Consolidated Electric Mfg. Co
 Crosby Electric House Signal Co
 C. & C. Electric Motor Co
 Eastern Electric Cable Co
 Boston, Mass : . . Electrical Accumulator Co
 Electric Development & Mfg. Co
 The Electric Gas Lighting Co
 The Electric & Machine Co
 Enos Electric System Co
 Eureka Door & Call Bell Co
 Gould-Tisdale Railway Signal Co
 Gray's Dynamo-Electric Machine Co
 Holtzer-Cabot Electric Co
 Mansfield Electric Co
 National Electric Service Co
 Redding Electrical Co
 Simple & Electrical Co
 U. S. Electric Light & Battery Co
 Ziegler Bros
 Cambridgeport, Mass : Shaefer Electric Mfg. Co
 Malden, Mass : . . B. S. Hale & Son
 Taunton, Mass : . Taunton Electrical Supply Co
 Detroit, Mich : . . Commercial Electric Co
 Detroit Electrical Works
 Detroit Motor Co
 Electrical Construction Co
 Michigan Electric Service Co

Detroit, Mich : . . Michigan Electric Works
 Woodward Electrical Co
 East Saginaw, Mich : Electrical Supply Co
 Grand Rapids, Mich : Peninsular Electric Co
 Kalamazoo, Mich : Electro Medical Battery Co
 Minneapolis, Minn : Bell Electric Co
 Minneapolis Electric & Construction Co
 St. Paul, Minn : . . Acme Electric Co
 Northern Electr. Construct. & Sup Co
 Thompson-Houston Electric Co
 Weston Electric Light Co
 Kansas City, Mo : . Gate City Electric Co
 Southwestern Electrical Supply Co
 St. Joseph, Mo : . . St. Joseph Electrical Supply Co
 St. Louis, Mo : . . Electric Supply Co
 Fidelity Carbon Mfg. Co
 St. Louis Electrical Co
 Omaha, Nebr : . . Midland Electric Co
 Nebraska Electric Co
 L. W. Wolfe & Co
 Manchester, N. H : Electrical Machine Co
 Camden, N. J : . . Applegate Electric Floor Mat Mfg. Co
 Albany, N. Y : . . Electric Mfg. Co
 Hamilton Electric Works
 Robinson Electric Works
 Auburn, N. Y : . . Auburn Electric Supply Co
 Brooklyn, N. Y : . Th C. H. Carter Co
 Electron Mfg. Co
 N. Y. & Brooklyn Electric Co
 Buffalo, N. Y : . . Buffalo Electric Co
 G. N. Brown & Co
 T. & E. Dickinson
 Valentine & Son
 New York City : . American Electric Works
 Arnon & Hochhauson Electric Co
 Barr Electr. Mfg. Co
 Abr. L. Bogart
 J. H. Bunnell & Co
 Complete Electric Construction Co
 Electric Construction & Supply Co
 Electric Power Controller Co
 Electric Signal Mfg. Co
 Empire City Electric Co
 E. S. Greeley & Co
 Hartford Dynamic Co
 Herzog Teleseme Co
 Jerome Kidder Mfg. Co

Baltimore, Md : . . James Bates
 E. Frank & Son
 Snowden & Cowman
 Boston, Mass : . . Elias Brewer
 L. S. Graves & Son
 Hawkins Machine Co
 Holmes & Blanchard
 Lowell Machine Shop
 Moore & Wyman
 Holyoke, Mass : . Holyoke Machine Works
 Detroit, Mich : . . Mich. Elevator & Engine Co
 Kansas City, Mo : . The Cookson Iron Works
 Kansas City Elevator Mfg. Co
 St. Louis, Mo : . . John S. Beggs & Co
 Miller & Saylor
 Newark, N. J : . . Currier & Sons
 Skinner & Leary
 Brooklyn, N. Y : . A. B. See Brooklyn
 Buffalo, N. Y : . . Howard Iron Works
 New York City : . The Ellithorpe Air Brake Co
 L. S. Graves & Sons
 Homan Bros. & Couch
 McGregor Mfg. Co
 Otis Brothers & Co
 Syracuse, N. Y : . . E. W. Houser
 Cincinnati, Ohio : The Jas. L. Haven Co
 C. G. Scott & Co
 Warner Elevator Mfg. Co
 Cleveland, Ohio : The Cleveland Elevator Co
 Toledo, Ohio : . . Smith & Haldeman Elevator Co
 Philadelphia, Pa : Harrington, Edwinton & Co
 McCalvey Elevator Works
 Morse, Williams & Co
 Richards Elevator Works
 Stokes & Parish Elevator Co
 Pittsburg, Pa : . . Marshall Bros
 Iron City Elevator & Mach. Works
 Milwaukee, Wis : Kieckhefer Elevator Co

FURNACE FACTORIES.

Birmingham, Ala : Alice Furnace Co
 Gadsden, Ala : . Coosa Furnace Co
 Denver, Colo : . . Colorado Furnace Works
 New Haven, Conn : The Raymond Furnace & Mfg. Co
 Chicago, Ill : . . The Boynton Furnace Co
 Butman Furnace Co
 Magee Furnace Co
 Peace Furnace Co

Chicago, Ill : . . . Servoss Furnace Co
 Boston, Mass : . . Boston Furnace Co
 Kohler Furnace & Steam Heat Co
 New York City : . Earl B. Chace & Co
 J. L. Mott Iron Works
 National Stove Co
 Richardson & Boynton Co
 The Richardson & Morgan Co
 The Simonds Mfg. Co
 Rochester, N. Y : Eureka Steam Heating Co
 Syracuse, N. Y : . Howard Furnace Co
 Cincinnati, Ohio : P. Kiefer, Jr., & Bros
 J. Rink & Son
 W. Miller Range & Furnace Co
 Cleveland, Ohio : Beecher Furnace Co
 F. & H. Born
 W. A. Smith & Co
 Columbus, Ohio : Columbus Warm Air Furnace Co
 Vogdsang Furnace Co
 Dayton, Ohio : . . Phoenix Iron Works
 Toledo, Ohio : . . Isaar D. Snead & Co
 Philadelphia, Pa : The Start Peterson Co
 James P. Wood & Co
 Pittsburg, Pa : . . Swindell & Smythe Co
 Swindell Wm. & Bros
 Milwaukee Wis : . L. J. Mueller Furnace Co
 Schwab & Sercomb

FURNITURE MANUFACTURERS.

San Francisco Cal : West Coast Furniture Co
 Wolf Braas & Valentin
 Denver Colo : . . Cooper Hagus Furniture Co
 Bridgeport Conn : Furniture Mnfg Co
 Lieberum Bro
 Hartford Conn : . The Hartford Furniture Co
 New Haven Conn : The New Haven Rattan Co
 Chicago Ill : . . . American Desk & Seating Co
 Bruschke Furniture Co
 Chicago Iron Bedstead Co
 Chicago Parlor Suit Co
 Crocker Chair Co
 Halvorson Furniture Co
 Hildreth Furniture Co
 National School Furnishing Co
 W. D. Snyder Furniture Co
 Louisville Ky : . Kentucky Furniture Mnfg Co
 Louisville Mnfg Co
 Portland Me : . . N. J. Hilln

Baltimore Md : . Camden Furniture Co
 The P. Hiss Mnfg Co
 Maryland Furniture Co
 Boston Mass : . . Bardwell Anderson & Co
 Daniels Badger & Co
 Derby & Kilmer Desk Co
 Dorchester Furniture Co
 Fairfield Furniture Co
 New England Furniture Co
 B. C. Noyes & Co
 Quigley Furniture Co
 George F. Roach & Co
 Grand Rapids, Mich : Winchester Furniture Co
 Berkey & Gay Furniture Co
 Grand Rapids Chair Co
 McCord & Bradfield Furniture Co
 Phoenix Furniture Co
 St. Louis, Mo : . . Burrell Comstock & Co
 J. H. Conrades Chair Co
 Missouri Furniture Co
 Jos. Peters Furniture Co
 St. Louis Furn. Workers Association
 Western Furniture Co
 Albany N. Y : . . W. A. Choate & Co
 Brooklyn N. Y : . Brooklyn Furniture Co
 Buffalo, N. Y : . . Buffalo Parlor Furniture Co
 Morgan Furniture Co
 Tift Furniture Co
 New York City : . Berkey & Gay Furniture Co
 B. M. Cowperthwait & Co
 Geo. Flint Co
 The Hale & Kilbun Mfg Co
 Herter Bros
 Hoskins & Sewell
 Knapp Sheppard & Co
 J. & J. Kohn
 J. W. Mason & Co
 New York Brass Furniture Co
 The New York Furniture Co
 Pottier Stymus & Co
 W. Schwarzwald & Co
 Tiffany J. B. & Co
 Syracuse N. Y : . Syracuse Cab Co
 Cincinnati O : . . The Alms Mfg Co
 The Ballman Hugenberg Co
 Central Furniture Association
 Cincinnati Bedstead Co
 Cincinnati Chair Co

Cincinnati, O : . . Front Street Furniture Co
 Liberty Furniture Co
 Royal Parlor Furniture Co
 Cleveland O : . . Cleveland Furniture Co
 National Furniture Co
 Toledo O : The Schauss Mfg
 Philadelphia Pa : The Hale Kilburn Mfg Co
 A. Lincoln & Son
 Williamsport Furniture Mfg Co
 Pittsburg Pa : . . Dauler Close & Johns
 Nashville Tenn : . Edgefield & Nashville Mfg Co
 Milwaukee Wis : Farrington Poplar Furniture Co
 Northwest Furniture Co
 Otto. J. Schoenleber
 A. F. Tanner Furniture Co
 W. S. Seaman Co
 Cream City Furniture Co

GAS AND OIL FACTORIES.

San Diego Cal : . San Diego Trading Co
 San Francisco Cal : Am Pat Gas Range & Liq. Fuel Co
 T. Day & Co
 Chicago Ill : . . . Adams & Westlake Co
 American Meter Co
 Chicago Gas Stove Co
 The Gas Consumer's Protect. Co
 The Goodwin Gas Stove and Meter Co
 George Harris
 Hess Stove Works
 G. F. Higgin Manufacturing Co
 Maryland Meter and Manufacturing Co
 U. S. Oil and Gas Stove Co
 Baltimore, Md : . Collins Stove Co
 C. Y. Davidson & Co
 P. Kries & Co
 W. E. Wood & Co
 Boston, Mass : . . Barstow Stove Co
 Burrows Manufacturing Co
 Champion Gas Heater Co
 Dinsmore Manufacturing Co
 Florence Machine Co
 Generating Gas Stove Co
 Maryland Meter and Manufacturing Co
 Monitor Oil Stove Co
 H. A. Norton
 W. F. Shaw
 Waldo Brothers
 C. W. Wheelock & Co

Florence, Mass.: Florence Machine Co
 Gardner, Mass.: American Oil Stove Co
 Springfield, Mass: J. L. Griswold
 Worcester, Mass: W. H. Thurston
 Minneapolis, Minn: Eureka Kerosene and Gas Heater Co
 St. Paul, Minn.: Minnesota Machine Co
 R. Seeger
 St. Louis, Mo.: G. Beck & Co
 Quick Meal Stove Co
 St. Louis Gasoline Stove Mfg Co
 Twin Burner Stove Co
 Whorf Gas Stove Co
 Brooklyn, N. Y.: Adams & Westlake Co
 New York City: American Gas Pressure Regal. Co
 American Meter Co
 R. E. Dietz Co
 Goodwin Gas Stove and Meter Co
 Sheldon Manufacturing Co
 Union Gas and Oil Stove Co
 Cincinnati, O.: American Meter Co
 F. Dieckman
 Werner, Dodd & Co
 Gas Illuminating Co
 Cleveland, O.: Daugler Stove Manufacturing Co
 Ohio Gas Heating and Dryer Co
 Cleveland, O.: Van Wie Gas Stove Co
 Toledo, O.: R. G. Bacon Co
 Philadelphia, Pa: Bell & Jones
 The Goodwin Gas Stove and Meter Co
 W. S. Lieber
 H. A. Willes
 Providence, R. I: Gas Retort Stove Co
 A. W. Faichild
 Providence Vapor and Oil Stove Co
 Milwaukee, Wis.: Brand Co The
 Milwaukee Gas Heating Co

HARDWARE, CUTLERY, SPRINGS, ETC.

Berlin, Conn: Peck, Stow & Wilcox Co
 Birmingham, Conn: The Birmingham Plow Mfg Co
 Bridgeport, Conn: E. S. Hotchkiss
 The Smith & Egge Manufacturing Co
 Collinsville, Conn: The Collins Co
 Hartford, Conn: The Charles Parker Co
 West Winsted, Conn: T. C. Richard's Hardware Co
 Chicago, Ill: Buffalo Specialty Manufacturing Co
 Capitol Manufacturing Co
 Reading Hardware Co

Dubuque, Iowa: Schrieber & Couchlar Manufacturing Co
 Bridgeport, Conn: Bridgeport Spring Co
 Spring Perch Co
 The Fairist Steel Co
 Waterbury, Conn: The Henry Spring Co
 Chicago, Ill: Chicago Tire and Spring Co
 The Rocker Spring Co
 Boston, Mass: ... The Boston Car Spring Co
 St. Louis, Mo: .. St. Louis Spring Co
 Cincinnati, O: ... The Cincinnati Spring Co
 New York City: National Car Spring Co
 Pittsburg, Pa: ... The A. French Spring Co

IRON WORKS AND FOUNDERS.

Anniston, Ala... Murray & Stevenson
 Noble Bros & Co
 Barton, Ala: ... W. H. Cherry & Co
 Birmingham, Ala., Aiken & Leighton
 Beggs & Bro
 Birmingham Iron and Machine works
 De Bardelaben & Underwood
 Iron City Foundry and Machine Works
 Linn Iron Works
 Williamson Iron Co
 Calera, Ala: ... Calera Iron Works
 Gadsden, Ala ... Gadsden Foundry and Machine Works
 Helena, Ala: ... Central Iron Works
 Montgomery, Ala., Montgomery Iron works
 Opelika, Ala: ... Phoenix Iron Works
 Selma, Ala: ... Union Iron Works Co
 Shelby Iron Works. Ala., Shelby Iron Co
 Stonewall, Ala.. Stonewall Iron Works
 Tuscaloosa, Ala. Tuscaloosa Foundry Mfg Co
 Little Rock, Ark. Rose City Iron Works
 Texarkana, Ark. J. C. Weed & Co
 Greenville, Cal.. Anderson & Lawrence
 Los Angeles, Cal. Baker Iron Works
 Columbia Iron Works
 Conklin Iron Works
 Union Iron Works
 Sacramento, Cal. Sacramento Foundry
 San Diego, Cal.. Standard Iron Works
 San Francisco, Cal., American Machine and Model Works
 Architectural Iron Works
 Bay City Iron Works
 California Machine Works
 W. T. Garrett & Co
 Industrial Iron Works

Sacramento, Cal. Main Street Iron Works
 Marine Iron Works
 Marshutz & Cantrell
 Nolte & Walsh
 G. H. Mixer
 Rankin, Brayton & Co
 Rix & Firth
 Risdon Iron and Locomotive Works
 Union Iron Works
 Stockton, Cal. . . .Globe Foundry and Machine Works
 Matteson & Williamson
 Denver, Colo . . .Colorado Iron Works
 Western Foundry
 Fort Collins, Col. Foundry and Machine Co
 Ansonia, Conn. .Farrell Foundry and Machine Co
 Birmingham, Conn., Birmingham Iron Foundry
 Brantford, Conn. Malleable Iron Fittings Co
 Bridgeport, Conn. Bridgeport Malleable Iron Co
 The Eaton, Cole & Burnham Co
 The New Home Manufacturing Co
 Hartford, Conn. .The Pratt & Whitney Co
 Huntsville, Conn. Lyman Hunt Iron Co
 Meriden, Conn. .Bradley & Hubbard Manufacturing Co
 Breckenridge Manufacturing Co
 Meriden, Conn. .Parker & Whipple Co
 Middletown, Conn., W. Douglas
 Mystic River, Conn. . Standard Machine Co
 New Britain, Conn., The Vulcan Iron Works
 Union Manufacturing Co
 New Haven, Conn., The G. F. Warner Manufacturing Co
 The McLagon Foundry Co
 New London, Conn., Albertson & Douglass Machine Co
 The Brown Cotton Gin Co
 The Hopson & Chapin Manufacturing Co
 Norwalk, Conn. .The Simonds Manufacturing Co
 Lockwood Manufacturing Co
 Norwich, Conn. .C. B. Rogers & Son
 Putman, Conn. .Putman Foundry and Mach. Corporation.
 Stanford, Conn. .Stanford Foundry Co
 Stonington, Conn., Atwood Machine Co
 Wallingford, Conn. .Judd Manufacturing Co
 Waterbury, Conn. Waterbury Farrel Foundry and Mach Co
 Winsted, Conn. .Winsted Foundry and Machine Co
 Sioux Falls, Dak. Sioux Falls Foundry and Machine Co
 Newport, Del . . .Marshall Iron Co
 Wilmington, Del. Phoenix Iron Foundry
 Washington, D. C., Potomac Iron Works
 Orlando, Fla . . .South Florida Foundry and Machine Co

Athens, Ga Athens Foundry and Machine Works
 Atlanta, Ga Van Winkle Gin and Machine Co
 Winship Machine Co
 Augusta, Ga Pendleton Foundry and Machine Co
 Columbus, Ga Columbus Iron Works
 Griffin, Ga Griffin Foundry and Machine Works
 Marietta, Ga. . . . Phoenix Foundry and Machine Works
 Rome, Ga Rome Foundry and Machine Works
 Savannah, Ga Kehoe Iron Works
 Belleville, Ill City Foundry and Machine Works
 Chicago, Ill Aetna Iron Works
 Aetna Iron and Steel Co
 Aetna Iron and Steel Works
 Ajax Forge Co
 J. H. Bass
 H. J. Berry & Son
 A. Balter & Son
 Bonton Foundry Co
 Brown Brothers Manufacturing Co
 M. C. Bullock Manufacturing Co
 Calumet Foundry Co
 Ohio Forge and Bolt Co
 Dearborn Foundry Co
 Eagle Foundry Co
 Eclipse Manufacturing Co
 Eddy Foundry Co
 Erie City Iron Works
 Excelsior Iron Works
 John Featherstons' Sons
 Gates' Iron Works
 Griffin Wheel and Foundry Co
 Hercules' Iron Works
 Illinois Iron Works
 Illinois Malleable Iron Co
 Illinois Steel Co
 Industrial Iron Works
 Jefferson Foundry Co
 The King & Andrew Co
 Kurtz Bros & Buhrer
 Marinette Iron Works Co
 Michigan Street Iron Foundry
 The J. L. Mott Iron Works
 A. Plamondon Manufacturing Co
 Soper Foundry Co
 South Halstead Street Iron Works
 The Sæad & Co Iron Works
 Union Foundry Works
 Vierling, McDowell & Co

Chicago, Ill. C. H. Woodruff & Co
 Decatur, Ill. Union Iron Works
 Geneva, Ill. The W. H. Howell Co
 Joliet, Ill. The Joliet Iron and Brass Works
 Lake View, Ill. Illinois Malleable Iron Works
 Moline, Ill. Moline Malleable Iron Co
 Union Malleable Iron Works
 Rock Falls, Ill. Keystone Manufacturing Co
 Rockford, Ill. Union Foundry and Machine Co
 Springfield, Ill. Aetna Foundry and Machine Shop
 Anderson, Ind. Anderson Foundry and Machine Works
 Auburn, Ind. Auburn Foundry and Machine Shop
 Brazil, Ind. Brazil Foundry and Machine Co
 Crown Point, Ind. Aetna Iron and Steel Works
 Decatur, Ind. Eagle Manufacturing Co
 Elkhardt Ind. Elkhardt Iron Works
 Fort Wayne, Ind. Bass Foundry and Machine Works
 Greencastle, Ind. Greencastle Foundry and Machine Co
 Huntington, Ind. Huntington Foundry and Machine Works
 Indianapolis, Ind. Eagle Machine Works
 Enterprise Foundry Co
 Indianapolis Foundry Co
 Indianapolis Mfg and Supply Co
 Madison, Ind. Madison Machine Co
 Mentone, Ind. Mentone Machine and Novelty works
 New Albany, Ind. Chas. Hegewald & Co
 Newcastle, Ind. Newcastle Iron works
 Richmond, Ind. Robinson Machine works
 Terre Haut, Ind. Phoenix Foundry and Machine works
 Burlington, Ia. Murray Iron works Co
 Cedar Rapids, Ia. Cedar Rapids Foundry and Machine Co
 Chariton, Ia. Chariton Iron works
 Council Bluffs, Ia. Council Bluffs Iron works
 Union Iron works
 Davenport, Ia. Davenport Foundry and Machine Co
 Des Moines, Ia. Des Moines Steam Boiler and Iron wk's
 Dubuque, Ia. Iowa Iron works Co
 Key City Iron works
 Langworthy-Adams Iron works
 Novelty Iron works
 Keokuk, Ia. Andrus, Loeffler & Co
 Excelsior Sheet Metal works
 Le Mars, Ia. Le Mars Foundry and Machine Shop
 Sioux City, Ia. Sioux City Foundry and Machine works
 Storm Lake, Ia. Storm Lake Foundry and Machine wk's
 Chetopa, Kan. Co-operative Novelty Iron works
 Concordia, Kan. Concordia Foundry works

Enterprise, Kan. J. B. Ersham Machine Co
 Fort Scott, Kan. Fort Scott Foundry and Machine works
 Girard, Kan. . . . Girard Foundry, Machine and Stove Co
 Kansas City, Kan. Armourdale Foundry Co
 Consal Iron works Co
 Industrial Iron works
 Union Iron works
 McPherson, Kan. McPherson Foundry and Machine Shops
 Mound City, Kan. Mound City Manufacturing Co
 Ottawa, Kan. . . . Novelty Iron works
 Ottawa Foundry Co
 Parson, Kan. . . . Parsons' Foundry and Novelty works
 Topeka, Kan. . . . Capital Iron works
 Ashland, Ky. . . . Ashland Foundry and Machine Shop
 Norton Iron works
 Louisville, Ky. . . Ainslie, Cochran & Co
 B. F. Avery & Sons
 Drummond Manuf'g Co
 Fischer-Leaf Co
 Grainger & Co
 Louisville Machine and Elevator works
 The Snead & Co Iron works
 Mt. Sterling, Ky. Mt. Sterling Iron Foundry and Mach. Co
 New Orleans, La. Whitney Iron works Co
 Bangor, Me. . . . Bangor Foundry and Machine Co
 Belfast, Me. . . . Belfast Machine works
 Bridgeton, Me. . . Bridgeton Machine Co
 Foxcroft, Me. . . . Foxcroft Iron Foundry and Machine Co
 Westbrook, Me. . . Westbrook Foundry Co
 Baltimore, Md. . . Baltimore Smelting works
 Bartlett, Hayward & Co
 James Bates
 Central Iron Foundry
 H. Ellicott. H. William & Sons
 Robt. Poole & Son Co
 Isaac A. Sheppard & Co
 Snowden & Cowman
 Adams, Mass. . . . Allen Iron works
 Ayer, Mass. . . . Doherty Machine Co
 Boston, Mass. . . . Central Iron Foundry
 Chelmsford Foundry Co
 Fulton Iron Foundry Co
 Highland Foundry Co
 Howard Iron Foundry
 Mechanics' Iron Foundry Co
 G. W. Smith Iron Co
 Taunton Iron works Co
 Tremont Foundry and Machine Co

Boston, Mass....The Wainwright Mf'g Co of Mass
 Wolaston Foundry Co
 B'dgewater, Mass.Bridgewater Iron Co
 Canton, Mass....Kinsley Iron and Machine Co
 Carver, Mass....Ellis Foundry Co
 Chelsea, Mass....New York Manufacturing Co
 Chicopee, Mass...Ames Manufacturing Co
 Fall River, Mass.Kilburn, Lincoln & Co
 Fitchburg, Mass.Simons Rolling Machine Co
 Foxboro, Mass....Foxboro Foundry and Machine Co
 Greenfield, Mass.Wiley & Russell Manufacturing Co
 Haverhill, Mass..Haverhill Iron Works
 Lynn, Mass.....Aetna Iron Foundry
 Mansfield, Mass..Central Iron Foundry
 New Bedf'd, Mass.New Bedford Iron Foundry
 N'h Adams, Mass.James Hunter & Son
 Orange, Mass....Chase Turbine Manufacturing Co
 Salem, Mass....Salem Foundry and Machine Shop
 Springfield, Mass.Hawkins Iron works
 Worcester, Mass.Arcade Malleable Iron Co.
 Worcester Malleable Iron Co

 Alpena, Mich....Alpena Industrial works
 Battle Cr'k, Mich.Battle Creek Machine Co
 Detroit, Mich .Detroit Bridge and Iron works
 Dry Dock Engine works
 Eagle Iron works
 Enterprise Machine works
 Frontier Iron and Brass works
 Fulton Iron and Engine works
 Murphy Iron works
 Russell Wheel and Foundry Co

 G'd Rapids, Mich.Fox Machine Co
 Grand Rapids Iron works.
 F. Hartman & Co
 Michigan Iron works
 Valley City Iron works
 Vulcan Iron works

 Hastings, Mich..Hastings Engine and Iron works
 Jackson, Mich...Jackson Foundry and Machine Co
 Kalamazoo, Mich.C. H. Bird & Co
 Lansing, Mich...Lansing Iron and Engine works
 Ludington, Mich.Industrial Iron works
 Ludington Iron works

 Manistee, Mich..Manistee Iron Works Co
 Marquette, Mich.Lakeside Iron works
 Menominee, Mich.Menominee Iron works
 Montague, Mich.Montague Iron works

Newark, N. J :.....Franklin Iron Works
 Ocean City, N. J :..Lake Mfg Co
 Patterson, N. J :.....The Watson Machine Co
 Union Foundry and Machine Works
 Trenton, N. J :.....Will H. Baker
 The Phoenix Iron Co
 Union Iron Works
 Albuquerque, N.M: Albuq. Foundry and Machine Co
 Albany, N. Y :.....J. McKinney & Son
 Brooklyn, N. Y: ...Bell and Type Foundry Co
 Brooklyn City Iron Works
 The Continental Iron Works
 Fulton Iron Works
 Healey Iron Works
 Hecla Archit. Bronze Iron Works
 Lewis & Fowler Mfg
 Progress. Iron Works
 South Brooklyn Steam Engine Works
 Taylor Williams & Sons
 Williamsburg Iron Foundry
 Buffalo, N. Y :.....Buffalo Cast Iron Pipe Co
 Eagle Iron Works
 King Iron Works
 Geo. W. Tifft Sons & Co
 New York City :.....Becket Foundry and Machine Co
 Sammel S. Bent & Son
 Birmingham Iron Foundry
 The E. G. Blakslee Mfg Co
 Central Forge Works
 Cheny & Hewlett
 Clauson & Hoffmeyer
 Coldwell Iron Works
 Delameter Iron Works
 Hecla Archit. Bronze and Iron Works
 Jackson Archit. Iron Works
 Jonson Foundry and Machine Co
 Lincoln Iron Works
 Manhattan Iron Works Co
 J. L. Mott Iron Works
 T. Shriver & Co
 Union Iron Works
 Wallis Iron Works
 Oswego, N. Y :.....Kingsford Foundry and Machine Wks
 Poughkeepsie, N. Y: Lane Bros
 Poughkeepsie Foundry and Machi. Co
 Rochester N. Y :....Co-operative Foundry Co
 Enterprise Foundry Co
 Munn Austice & Co

Syracuse, N. Y:.....	Phoenix Foundry and Machine Co Porter Mfg Co Syracuse Malleable Iron Works
Troy, N. Y:.....	Fuller & Warren Co Morrison Colwell & Page Troy Architect. Iron Works Troy Malleable Iron Co
Alliance, O:	Morgan Engineering Co
Bucyrus, O:.....	Bucyrus Steam Shovel and Dredge Co
Canton, O:.....	The Miller Mfg Co
Cincinnati, O:.....	Blymeyer Iron Works Excelsior Foundry Co Globe Foundry Co The I. & E. Greenwald Co Hamilton Iron Foundry The L. James Haven Co Hoffinghoff & Lane Foundry Co Lane & Bodley Co Queen City Foundry Queen City Machine Works The Stacey Mfg Co Sam. C. Tatum & Co
Cleveland, O:	Bowler & Co T. H. Brooks & Co City Foundry Co Cleveland City Forge and Iron Co Cleveland Foundry Co Cleveland Ship Building Co Excelsior Iron Works Co The Globe Iron Works Co The Kilby Mfg Co Maher & Brayton Myers Mfg and Foundry Co Riverside Foundry Works Standard Foundry and Mfg Co The Taylor & Boggis Foundry Co The Variety Iron Works Co Walker Mfg Co Thomas D. West Foundry Co
Columbus, O:.....	Columbus Machine Co Eagle Foundry Simpson Iron Co South End Foundry Union Foundry
Dayton, O:.....	Buckeye Iron and Brass Works W. P. Callahan & Co Phoenix Iron Works
Harmer, O:.....	Harmer Foundry and Machine Co

Lancaster, O:.....Eagle Machine Co
 Logan, O:.....Motherwell Iron and Steel Co
 Mansfield, O:.....Union Foundry and Machine Works
 Marion, O:.....Marion Malleable Iron Works
 Middleport, O:.....Ohio Machine Co
 Vulcan Machine Co
 , Portsmouth, O:.....Portsmouth Foundry and Machine Wks
 Sandusky, O:.....Barney & Kilby
 Springfield, O:Blakeney Foundry Co
 Toledo, O:.....Eagle Foundry
 N. Haughton Foundry and Machine Co
 Russell Iron Works
 Toledo Foundry and Machine Co.
 Vulcan Iron Works
 Warren, O:Ætna Machine Co
 Wellston, O:Wellston Foundry and Machine Co
 Wilmington, O:Champion Bridge Co
 Portland, Oregon:..Carroll & Johnson
 Willimette Iron Works
 Alleghaney, Pa:.....Thos. Carlin's Sons
 Porter Foundry and Machine Co
 Union Foundry and Machine Co
 Altoona, Pa:.....Altoona Iron Co
 Emporium, Pa:.....Emporium Machine Co
 Erie, Pa:.....Erie City Foundry
 Erie Forge Co
 Globe Iron Foundry
 Humboldt Iron Works
 Southside Iron Works
 Lindsey, Pa:.....Clayville Mfg Co
 Meadville, Pa:.....Meadville Vice Co
 Phœnix Iron Works
 Oseola, Pa:.....Oseola Mfg Co
 Philadelphia, Pa: C. A. Blessing
 E. E. Brown & Co
 L. S. Cassin & Co
 Chambers Bro. & Co
 Chester Foundry and Machine Co
 The J. Samuel Creswell Iron Works
 Flagg, Stanley & Co
 C. Hitzeroth
 James Moore
 North Bro. Mfg Co
 A. Penn Iron Works
 Theo. B. Rohrmann
 Schuman & Lynch
 I. A. Sheppard & Co
 Southwark Foundry and Machine Co

Philadelphia, Pa:...Tacony Iron and Metal Co
 Union Iron Foundry
 Thomas Wood & Co
 Pittsburg, Pa:..... Fisher Foundry and Machine Co
 Jones & Laughlin
 Lewis Foundry and Machine Co
 The McConway, Torley Co
 Machintoch, Hemphill & Co
 Marshall Foundry and Construction
 National Foundry & Pipe works
 Pittsburg Foundry Co
 Pittsburg Mfg Co
 Reed Foundry Co
 Robinson Rea Mfg Co
 Sraife Foundry and Machine Co
 I. & S. Totten & Hogg
 Union Foundry and Machine Co
 Reading, Pa:.....F. & M. Mellert Co
 Scranton, Pa:..... Green Ridge Iron works
 Warren, Pa:Struthers, Wells & Co
 Wilkesbarre, Pa: ...Dickson Mfg Co
 Vulean Iron Works
 Wilkesbarre Iron Works
 Hope Valley, R. I: Nichols and Langworthy Machine Co.
 Providence, R. I:...Builders Iron Foundry
 Corliss Steam Engine Co
 Fuller Iron Works
 Granger Foundry and Machine Co
 New England Butt Co
 Phoenix Iron Foundry
 Providence Steam Engine Co
 R. J. Malleable Iron Works
 Chattanooga,Tenn: Cahill Iron Works
 Chattanooga Iron Co
 Lookout Rolling Mill Co
 Providence Steel Works
 Roane Iron Co
 Vulcan Iron and Nail Works
 WarrenCar and Wagon Foundry
 Knoxville, Tenn:...Knoxville Iron Co
 Knoxville Foundry and Machine Co
 Memphis, Tenn:... Gun & Pagin
 T. L. Risk & Co
 Nashville, Tenn: ...Cherry, Morrow & Co
 S. E. Jones & Sons
 Novelty Foundry Co
 Tenn. Range and Mfg Co
 Calvert, Texas:.....Calvert Foundry and Mfg Co

Galveston, Texas: ...C B. Lee & Co
 Houston, Texas:Wiggins & Simpson
 Marshall, Texas: ...Marshall Car and Foundry Co
 Tyler, Texas:Dilley Foundry and Machine Co
 Salt Lake City:Davis Howe & Co
 Salt Lake Foundry and Machine Co
 Rutland, Vt:Lincoln Iron Works
 Rutland Foundry & Machine Shop Co
 St. Johnsbury, Vt; Acme Iron works
 Goshen, Va:The Iron and Steel Association
 Lynchburg, Va:Cleveland & Sons
 Norfolk, Va:Elizabeth Foundry
 Etna Iron works
 Norfolk Iron works
 Portsmouth, Va: ...Portsmouth Iron works
 Richmond, Va:Jos. Hall Co
 Old Dominion Iron and Nail works
 Asa Snyder & Co
 Tredegar Iron works
 Vulcan Iron works
 Palatine, West Va: Marion Machine works
 Eau Claire, Wis: ...Phoenix Mfg Co
 Milwaukee, Wis: ...Edw. P. Allis & Co
 Wm. Bayley & Co
 The Filer Stowell Co.
 Hoffman & Billings Mfg Co
 Moore Mfg and Foundry Co
 The Wilkin Mfg Co

LAMP AND GASBURNER MANUFACTURERS.

Meriden, Conn: ... Edward Miller & Co
 Newark, N. J.The Albo Carbon Light Co
 Brooklyn, N. Y: ...James W. Lyon
 New York City:E. P. Gleason Mfg Co
 Canton, O:The Sun Vapor Street Light Co
 Philadelphia, Pa: ...Chas. Gefroerer
 Henry Schrader
 The Siemens Lungren Co
 Pittsburg, Pa:The Albo Carbon Light Co

LAMP AND LANTERN MANUFACTURERS.

San Francisco, Cal: E. Boesch & Co
 A. S. Graf & Co
 Meriden, Conn:Bradley & Hubbard Mfg Co
 The Chas. Parker Co
 Meriden Britannia Co
 Edw. Miller & Co
 Waterbury, Conn: Benedict & Burnham Mfg Co

Cincinnati, O :The Clipper Mfg Co
 The McHenry Co
 Post & Co
 Queen City Lamp Co
 Cleveland, O:.....Lamp and Brass works
 W. J. Gordon
 The Standard Lighting Co
 Star Oil Burner Co
 Columbus, O:Columbus Lantern works
 Alleghaney, Pa: ...Pittsburg Brass Co
 Philadelphia, Pa:....American Reflector Co
 Mascot Mfg Co
 C. H. Pascoe & Co
 The Siemens Lungren Co
 Standard Gas Lamp Co
 The Pennsylvania Globe Gas Light Co
 Wheeler Reflector and Light Co
 The Neumann Co
 Wilhelm & Co
 Pittsburg, Pa:.....S. Morrow & Co
 Milwaukee, Wis :...Loeffelholz & Co

LOCK MANUFACTURERS.

San Francisco, Cal: California Safe and Lock Co
 Wichell & Richards
 S. B. Paige & Co
 Branford, Conn:...Branford Lock works
 Bridgeport, Conn:..The Cornwall & Patterson Mfg Co
 The Smith & Egge Mfg Co
 Meriden, Conn :....The Chas. Parker Co
 Middletown, Conn: William Wileox Mfg Co
 New Britain, Conn: Corbin Cabinet Lock Co
 New Haven, Conn: Mallory Wheeler Co
 Norwalk, Conn:.....Duplex Supply Co
 Norwalk Lock Co
 Terryville, Conn:...Eagle Lock Co
 Chicago, Ill :.....Automatic Lock Hook Mfg Co
 Sargent, Greenleaf & Brooks
 Yale & Towine Mfg Co
 Boston, Mass :.....L. L. Bate & Co
 Commercial Lock Co
 Wm. Hall & Co
 Hanson Elevator Lock Co
 Newark, N. J:Phoenix Lock works
 The National Lock Washer Co
 New York City:.....Champion Safety Lock Co
 New York City:Eagle Lock Co
 The Mallory Wheeler Co

New York City :Norwich Lock Mfg Co
 W. Wilcox Mfg Co
 Burton, O :Edison Lock Co
 Cincinnati, O :Cincinnati Safe and Lock Co
 Consol. Time Lock Co
 European Lock and Time Co
 Cleveland, O :Industrial Lock and Mfg Co
 National Safe and Lock Co
 Perkins Lock Mfg Co
 Geneva O :Eagle Lock Co
 Philadelphia, Pa : ...Autom. Tumbler Lock Co
 Miller Lock Co
 Penn Lock Co
 Pittsburg, Pa :Brittan, Graham & Mathes
 York, Pa :York Safe and Lock Co
 Providence, R. I : ...New England Butt Co

LOCOMOTIVE BUILDERS.

Birmingham, Ala : ...Douglas Engine Co
 San Francisco, Cal: Risdon Iron and Locomotive Works
 Union Iron Works
 Portland, Me :Portland Co
 Mt. Savage, Md :Mt. Savage Locomotive Works
 Boston, Mass :Hinkley Locomotive Co
 Manchester Locomotive Works
 Taunton, Mass :Locomotive Manfg Co
 South Newmarket, N. H : G. E. Fifield
 Paterson, N. J :Cooke Locomotive and Machine Co
 Grant Locomotive Works
 Dunkirk, N. Y :Brooks Locomotive Works
 New York City :N. Y. Locomotive Works
 Strong Locomotive Works
 Schenectady, N. Y : McQueen Locomotive Works
 Schenectady Locomotive Works
 Alleghany, Pa :Pittsburg Locomotive and Car Works
 Philadelphia, Pa : ...The Baldwin Locomotive Works
 Pittsburg, Pa :H. K. Porter & Co
 Providence, R. I : ...R. I. Locomotive Werks
 Nashville, Tenn : ...Adams & Price
 Richmond, Va :Richmond Locomotive and Machine Works

MACHINERY MANUFACTURERS.

(See also Iron Works and Foundries.)

AGRICULTURAL.

Athens, Ala :Alabama Agricultural Mngf Co
 Birmingham, Ala : Birmingham Tool and Implement Works
 Little Rock, Ark : ...The Dudley E. Jones Co
 Texarkana, Ark :Wilkerson C

Sacramento, Cal : ... Bull & Grant Farm Implement Co
 San Francisco, Cal : Oliver Chilled Plow Works
 Pacific Saw Manufacturing Co
 Price Jacob
 South Bond Iron Works
 Truman, Hooker & Co
 Wickson G. G., & Co
 Stockton, Cal : Stockton Harvester and Agricult. Works
 Denver, Col : Kinsey J., Implement Co
 Hartford Conn : The Collins Company
 New Haven, Conn : .. Bradley Robt. B., & Co
 Fargo, Dak : Howland & Sons
 Odessa, Del : Aspril L. V., & Son
 Washington, D. C : .. Heiskell P. H., Jr., & Co
 Jacksonville, Fla : ... Hubbard S. B., & Co
 Atlanta, Ga : Southern Agrl. Works
 Alton, Ill : Alton Agricult. Works
 Chicago, Ill : Appleton Mfg Co
 Austin F. C., Mfg Co
 Goulds & Caldwell
 McCormick Harvesting Machine Co
 Morgan D. S., & Co
 Rice & Whitacre Mfg Co
 Silver & Deming Mfg Co
 The Plano Mfg Co
 Walter A., Machine Co
 Warder, Bushnell & Glesner
 Quincy, Ill : Quincy Agricultural Works
 Fort Wayne, Ind : ... Horton Mfg Co
 Indianapolis, Ind : ... The Beedle & Kelly Co
 Council Bluffs, Ia : .. Marseilles Mfg Co
 Davenport, Ia : Davis I. S., & Sons
 Kansas City, Mo : ... Trumbull, Reynolds & Allen Mfg Co
 Louisville, Ky : Avery B. F., & Sons
 Southwestern Agricultural Works
 Portland, Me : Kelley D. T.
 Baltimore, Md : Dinsmore & Kastendike
 Whitman E., Sons & Co
 Boston, Mass : Ames Plow Co
 Whitman & Barnes Mfg Co
 Detroit, Mich : Rawson Mfg Co
 Grand Rapids, Mich : Wheeler & Green
 Jackson, Mich : Michigan Implement and Machine Co
 Minneapolis, Minn : Advance Thresher Co
 The Manufacturers Syndicate
 The Minneapolis Threshing Machine Co
 Northwestern Implement and Wagon Co
 St. Paul, Minn : Mast, Buford & Burwell Co

Kansas City, Mo :... Esterly Harvesting Machine Co
 St. Louis, Mo :..... Birdsell Mfg Co
 Kingsland & Douglas Mfg Co
 Whitman Agricultural Co
 Camden, N. J :..... Taylor Brothers
 Albany, N. Y :..... Wheeler & Melick Mnf Co
 New York City :..... Alexander L., & Co
 The Hagganum Mfg Corporation
 Rochester, N. Y :..... Vick James
 Troy, N. Y :..... Crandall & Morrison
 Canton, O :..... Aultman C., A Co
 Cleveland, O :..... Luetkemeyer H. W. & Sons
 Philadelphia, Pa :... Gardiner John, & Co

CABLE RAILWAY MACHINERY.

Kansas City, Mo :... Industrial Iron Works
 Cleveland, O :..... Kilby Mfg Co

ELECTRIC LIGHT.

Manchester, Conn :.. Mather Electric Co
 Middletown, Conn :.. Schuyler Electric Co
 Plantsville, Conn :.. Connecticut Motor Co
 Windsor, Conn :..... Eddy Electric Mfg Co
 Chicago, Ill :..... Sperry Electric Co
 Peoria, Ill :..... Royal Electric Co
 Rockford, Ill :..... Rockford Electric Mfg Co
 Fort Wayne, Ind :... Fort Wayne Electric Co
 Indianapolis, Ind :... The C. D. Jenney Co
 Terre Haute, Ind :... Kester Electric Co
 Davenport, Iowa :... Hawkeye Electric Mfg Co
 Boston Mass;..... Consolidated Electric Mfg Co
 Economic Electric Mfg Co
 Kimball F. M., & Co
 Thomson-Houston Electric Co
 Van Choate Electric Co
 Fitchburg, Mass :... Colburn J. W., & Co
 Lowell, Mass :..... Eastern Light and Storage Battery Co
 Detroit, Mich :..... Detroit Electrical Works
 Standard Electric Co
 Woodward Electrical Co
 St. Paul, Minn :..... The Acme Electric Co
 St. Louis, Mo :..... Heisler Electric Light Co
 Brooklyn, N. Y :..... Brooklyn Electric Construction Co
 Elektron Mfg Co
 Mutual Electric Mfg Co
 R. & B. Electric Mfg Co
 New York City :..... Anglo-Am. Electric Light Mfg Co
 Ball Electric Light Co

New York City :..... The Clark Electric Comp
 Cleveland Motor Co
 Continental Dynamo Co
 Daft Electric Light Co
 Easton Electric Co
 Electric Construction and Supply Co
 Electric Accumulator Co
 Empire City Electric Co
 Eureka Electric Co
 Excelsior Electric Co
 Gibson Electric Co
 Isolated Accumulator Co
 Julien Electric Co
 Macroon Storage Battery Co
 New Am. Electric Arc Light Co
 New Century Electric Co
 Sawyer Man Electric Co
 United Edison Mfg Co
 U. S. Electric Lighting Co
 Wenstrom Northern Electric Co
 Cincinnati, O;..... G. F. Card Mfg Co
 Cincinnati, O :..... Queen City Electric Co
 Cleveland, O :..... The Bruch Electric Co
 Lima, O :..... Silvey Electric Co
 Philadelphia, Pa :... Aurora Electric Co
 Electro Dynamic Co
 La Roche Electric Works
 National Electric Light & Power Works
 Novelty Electric Co
 Pittsburg, Pa :..... Westinghouse Electric Co
 Eau Claire, Wis :... National Electric Mfg Co

GAS MACHINES.—(Gas Works.)

San Francisco, Cal : H. J. Dykes & Co
 Independent Autom. Portable Gas Works
 Chicago, Ill :..... Bradley Gas Machine Co
 Fahnejehn Incandescent Gas Light
 Gilbert & Barker Mfg Co
 Globe Light and Heat Co
 Mathews Gas Machine Co
 Baltimore, Md :..... Lay Gas Machine Co
 Boston, Mass :..... Connelly & Co
 National Automatic Gas Machine Co
 Rossney Gas Saving Co
 Gilbert & Barker Mfg Co
 Detroit, Mich :..... Detroit Heating and Lighting Co
 Newark, N. J :..... Denny Bro. & Co
 Smith & Sayre Mfg Co

Newark, N. J :Tirrells Gas Machine Co
 New York City :.....Connelly & Co
 Continental Gas Engine Co
 Gilbert & Barker Mfg Co
 Natural Gas Improvement Co
 Welch & Lawson
 Cincinnati, O :..... The Coleman Gas Mach. Mfg Co
 The A. J. English Co
 J. G. Isham & Co
 Cleveland, O :..... The Cleveland Gas Machine Co
 Morristown, Pa :.....Lowe Mfg Co
 Philadelphia, Pa :...Beacon Construction Co
 Consumer Gas Works
 Gas Works Construction Co
 Louisiana Construction Co
 The Pennsylvania Globe Gas Light Co
 United Gas Improvement Co

HYDRAULIC MACHINERY.

San Francisco, Cal: Dow Steam Pump Works
 W. T. Garratt & Co
 San Francisco, Cal: F. Smith & Co
 Weed & Kingwell
 Ausonia, Conn :... The Farrell Foundry Machine Co
 Birmingham, Ala :.. Birmingham Iron Foundry
 Middletown, Conn :..W. Douglas
 Wilmington, Conn:..A. Gawthrop & Son
 Louisville, Ky :.....Ainslie, Cochran & Co
 Baltimore, Md :.....Thomas K. Carey & Bros
 Ernest Frank & Son
 Snowden & Cowman
 Boston Mass :.....Lowell Machine Shops
 Brooklyn, N. Y :Wm. Taylor & Sons
 New York City :.....The Tuerk Hydraulic Power Co
 Watson & Stillman
 Alliance, O :.....Morgan Engineering Co
 Cincinnati O :.....John McGowan Co
 Cleveland O :.....Kaufholz Bros
 Dayton, O :.....G. J. Roberts & Co
 The Smith & Vaile Co
 Salem, O :.....Silver Deming Mfg Co
 Alleghany, O :.....Duff Mfg Co
 Philadelphia, Pa :...Arthur Falkenau
 Tinius, Olsen & Co
 Pittsburg, Pa :.....Mackintosh, Hemphill & Co
 Scaife Foundry Machine Co
 Providence, R. I :... Phoenix Iron Foundry
 Roanoke, Va :..... Hydraulic Engine Mfg Co

MACHINERY IN GENERAL.

Special, Experimental and Model Machinery, Etc.

San Francisco, Cal :	Aetna Iron Works
	Joshua Hendy Machine Works
Denver, Col :.....	Hendey & Meyer Engineering Co
	Hendrie & Bolthoff Mfg Co
	Kennedy & Pierre Machinery Co
	Western Prospecting Co
Bridgeport, Conn :..	Bridgeport Machine & Tool Works
	The Bridgeport Forge Co
New London, Conn:	D. E. Whiton Machine Co
Wilmington, Del :..	Trump Machine Co
Chicago, Ill :.....	Berlin Machine Works
	Machinist Supply Co
	Palmer Bros
	Palmyra Manfg Co
	Porter Manfg Co
	Preble Manufacturing Works
	Schrauem & Pease
Chicago, Ill :	M. H. Walker & Co
	S. A. Woods Machine Co
Galesburg, Ill :.....	Industrial Works
Rockport, Ill :.....	Lillibridge & Erbach
	Utter Manfg Co
Springfield, Ill :	Gillet & Hunter
Indianapolis, Ind :	Chandler & Taylor Co
	Howard Machine Works
	Steel Pulley and Machine Works
Milton, Ind :.....	Dorsey Machine Co
Munie, Ind :.....	Munie Engine Works
New Albany, Ind:	Hogewald & Co
Dubuque, Iowa :.....	Novelty Iron Works
Louisville Ky :.....	W. T. Pyne
	Union Machine Co
Baltimore, Md :.....	Bartlett, Haywood & Co
	James Bates
	Thomas K. Carey & Bros
	The Elliott Machine Co
	H. C. Larabee
	Parker & Knight
	Stephenson & Co
Boston, Mass :.....	Am Tool and Machine Co
	Atlantic Works
	Julian D'este & Co
	Edson Manfg Co
	Electric Machine Co
	Hersey Brothers

Boston, Mass :.....Holmes & Blanchard
 Peet Valve Co
 Pettee Machine Works
 Riley & Gray
 Webb & Watson
 Waltham, Mass :.....John Stark
 Westfield, Mass :...The H. B. Smith Co
 Worcester, Mass :...A. Burlingam & Co
 L. W. Pond Machine Co
 Pratt Sumner & Co
 Detroit, Mich :Christian Bauman
 Sam F. Hodge & Co
 A. Spranger & Son
 Grand Rapids, Mich : F. Hartman & Co
 Kalamazoo, Mich : Strait & Packard
 Minneapolis, Minn : W. Cooper & Co
 Kinward & Haines Manfg Co
 St. Paul, Minn :.....Lee & Hoff
 Wm. Roger & Co
 Meridian, Miss :.....Progressive Machine Works
 Kansas City, Mo :...Jordan & Leas
 Witte Iron Works
 St. Louis, Mo :.....Albrecht & Schellhorn
 Bignall & Keeler Manfg Co
 D. A. Brislin
 Chouteau Manfg Co
 J. A. Crossman & Co
 W. Ellison & Son
 Felber Machine Works
 Hood & Murray Machine Works
 Mielenz, Ziegler & Co
 C. Moxey & Co
 E. Wachter Machine Works
 Westlake & Button Novelty Works Co
 Omaha, Neb :.....Omaha Model Machine Works
 Paxton & Vierling
 Mount Holly, N. J : T. C. Alcott & Son
 Davison & Driggs
 Gould & Eberhardt
 W. G. Greenfield & Co
 Ohl & Haffner
 G. E. Parker & Co
 Pierre & Noble
 L. Stillwell & Co
 Plainfield, N. J :.....Pond Mach. Toll Co
 Trenton, N. J :.....Duncan McKenzie
 Albany, N. Y :.....Sullivan & Ehlers
 Brooklyn, N. Y :.....Bentley & Adams

Brooklyn, N. Y : Brady Manfg Co
 Kennedy & Diss
 James W. Lyon
 Merrill Bros
 J. S. Simpson
 White & Price
 Buffalo, N. Y : Daupster Engine Works
 Frank & Co
 Kendall Manfg Co
 Niagara Machine Co
 Niagara Stamping and Tool Co
 The J. T. Noye Manfg Co
 New York City : ... Chris. Abele
 P. Backus & Son
 Ph. J. Bender & Sons
 Benton Manfg Co
 J. S. Birch & Co
 Chas. Bramberg
 J. DeBauvais
 Delamater, C. D. & Co.
 New York City : Eddy, George B.
 Emmerich & Vonderlehr
 Jackson T. A.
 Kek & Co.
 Lieb Machine Works
 N. Pattern Machine & Die Co.
 Rochester, N. Y. . Connell & Dengler
 L. S. Graves & Son
 Troy, N. Y : Andams Laundry Machine Co
 Knowlson & Kelley
 Tolhurst Machine Co
 Waterford, N, Y : ... Gage Machine Works
 Cincinnati, O : Wm. Barker & Co
 Chas. Berkhemer & Co
 Bichford Drill Co
 The Egan Co
 Kech & Co
 Krieger, Burkhardt & Co
 The Laidlaw & Dunn Co
 Lodge & Davis Machine Tool Co
 Muller Machine Tool Co
 Lawrence Roth
 Sebastian May & Co
 Straub Machinery Co
 Cleveland, O : J. Evans & Co
 Forest City Machine Works
 Franklin Machine Works
 Horsburg & Scott

Huntington & Lunt
 Kaufholz Bros
 Otto Konigslow .
 Langenau Manufacturing Co
 River Machine Co
 The Variety Iron Works Co
 Walker Manufacturing Co
 Columbus, O :Capital City Machine Works
 Industrial Machine Works
 I. G. Pulling & Co
 The P. Hayden Saddlery Hardware Co
 Dayton, O :Buckeye Iron and Brass Works
 Joice, Cridland & Co
 The Smith & Vaile Co
 Alleghany, Pa :Specialty Manufacturing Co
 Philadelphia, Pa : ...Belmont Machine Works
 Bemet, Milles & Co
 Berry & Orton Co
 James Cardell & Co
 Chambers Bros. & Co
 Enterprise Quilting Machine Co
 Gordon & Gilbert
 Edwin Harrington, Son & Co
 Jos. Heginbottom Machine Co
 Lamb Machine Co
 National Boiler and Machine Co
 Neafie & Levy
 Olsen, Tinius & Co
 Pedrick & Ayer
 Schaum & Uhlinger
 L. Schutts & Co
 Taws & Hartman
 Textile Machine Co
 Wynn & Henwood
 Pittsburg, Pa :Bair & Gazzam
 Best, Fox & Co
 Butler & Gardner
 Franz & Braun
 McGill & Co
 Shook, Anderson & Co
 S. Tretheway and Co
 Nashville, Tenn : ...Southern Novelty Works
 Dallas, Texas :Hetherington & Nason
 Galveston, Texas : ...Walsh & Cleary
 Salt Lake City, Utah : Silver and Iron Works
 Utah & Montana Machine Co
 Milwaukee, Wis : ...The Wilkin Manfg Co

MODEL MAKING.

San Francisco, Cal.: Coffin, Alonzo
Bridgeport, Conn.: Platt, O. S.
New Haven, Conn.: Henn, A. S. & Co.
Lambert, Geo D.
Waterbury, Conn.: Draher, J.
Chicago, Ill :..... .. Aronson, F.
Brown, H. L.
Garden City Model Works
Meunch, Rob
Union Model Works
Indianapolis, Ind: Hood, H. P.
Boston, Mass: Burley, John
Steers, William
St. Paul, Minn: . . . Seeger, Rob
St. Louis, Mo: Buchanan & Co
Medart, Fred
Jersey City, N. J: . . Currier, C. & Sons
Trenton, N. J: . . . Baker, William H
New York City; . Danies, Thomas
Dutcher, G. W.
Einbigler & Adler

NEWS PAPERS.

Augusta, Me: . . . Maine Farmer
Lewistown Me: . . Weekly Journal
Portland, Me: . . . Maine State Press
Concord, N. H: . . People & N. H. Patriot
Dover, N. H: . . . Morning Star
Manchester, N. H: Mirror & Farmer
Battlesboro, Vt: . Vermont Phoenix
Lyndon, Vt: . . . Vermont Union
Montpelier, Vt: . . Argus & Patriot
Boston, Mass: . . . Sunday Courier
Weekly Globe
Weekly Journal
Mass. Ploughman
New England Farmer
New England Staaten Zeitung
Pilot
Greenfield, Mass: . Gazette & Courier
New Bedford, Mass: Republican Standard
Northampton, Mass: Hampshire Gazette
Pittsfield, Mass: . Berkshire Co. Eagle
Somerville, Mass: Journal
Springfield, Mass: Weekly Republican
Weekly Union
Worcester, Mass: . Weekly Spy

Newport, R. I: . Mercury
 Providence, R. I. . Sunday Telegram
 Woonsocket, R. I : Patriot
 Bridgeport, Conn : Rep. Standard
 Danbury, Conn : . News
 Hartford, Conn : . Conn. Catholic
 Conn. Courant
 Conn. Post
 Weekly Times
 New Haven, Conn : Columbia Register
 Sunday Register
 West Winsted, Conn Winsted Herald
 Albany, N. Y : . . Cultivator & Country Gentleman
 Weekly Journal
 Sunday Press
 Weekly Times
 Bath, N. Y : . . . Steuben Farmers Advocate
 Brooklyn, N. Y : . Anzeiger
 News
 Review
 Buffalo, N. Y : . . Aurora (Germ.)
 Cambridge, N. Y : . Washington County Post
 Elmira, N. Y : . . Husbandman
 Hudson, N. Y : . . Gazette
 Lockport, N. Y : . Niagara Democrat
 New York City : . Am. Art Journal
 Am. Machinist
 Weekly Baptist
 Catholic Herald
 Christian Advocate
 Evening Post
 Weekly Herald
 Weekly News
 Wocheentliche Staatszeitung
 Weekly Sun
 Weekly Times
 Weekly World
 Rochester, N. Y : . Am. Rural Home
 Weekly Democrat
 Express
 Syracuse, N. Y : . . Weekly Journal
 Troy, N. Y : . . . Weekly Press
 Weekly Times
 Utica, N. Y : . . . Herald, Gazette & Courier
 Weekly Observer
 Y. Drych
 Watertown, N. Y : Reformer
 Allentown, Pa. . . Friedens Bote

Allentown, Pa :Welt Bote
 Bryn Mawr, Pa ; . Home News
 Doylestown, Pa : . Bucks County Intelligencer
 Democrat
 Germantown, Pa : . Telegraph, (weekly)
 Harrisburg, Pa : . Telegraph, [weekly]
 Lutheran Observer
 Philadelphia, Pa : . Weekly Press
 " Times
 Ver. Staaten Zeitung
 Pittsburg, Pa : . . Chronicle
 Weekly Post
 " Telegraph
 Reading, Pa : " Eagle
 West Chester, Pa : Jeffersonian
 Asbury Park, N. J : Journal
 Newark, N. J : . Journal Weekly
 Baltimore, Md. . . American
 Baltimorean
 Deutsche Correspondent
 Gazette
 Weekly Sun
 Telegram
 Washington, D. C : Weekly Post
 Star
 Norfolk, Va : . . . Weekly Landmark
 Virginian
 Richmond, Va : . . Weekly State
 " Whig
 Wheeling, W. Va : Deutsche Zeitung
 Intelligencer
 Saturday Evening Journal
 Goldsboro, N. C : . Transcript-Messenger
 Atlanta, Ga : Weekly Constitution
 Sunny South
 Columbus, Ga : . . . Weekly Times
 Savannah, Ga : . . . " News
 Mobile, Ala : Register
 Montgomery, Ala : Weekly Adv. & Mail
 Selma, Ala : Southern Argus
 New Orleans, La : . Weekly Deutsche Zeitung
 Observer
 Weekly Picayune
 " Times
 Austin, Texas : . . . Texas Capital
 Dallas, Texas : . . . Weekly Herald
 Galveston, Texas : Weekly News
 " Texas Post

Houston Texas:	.	"	Age
San Antonio, Texas:		"	Express
		"	Freie Presse
Waco, Texas:	. . .		Examiner and Patron
Little Rock, Ark.,	Weekly		Arkansas Democrat
		"	Arkansas Gazette
Frankfort Ky.,	. .	"	Kentucky Yeoman
Lexington, Ky.,	.	"	Press
Louisville, Ky.,	.		Agriculturist Legal Tender
			Weekly Anzeiger
		"	Commercial
		"	Courier-Journal
			Farmers Home Journal
Paris, Ky.,		True Kentuckian
Chattanooga, Tenn.,	Weekly		Times
Knoxville, Tenn.,	.	"	Tribune
Memphis, Tenn.,	.	"	Appeal
		"	Avalanche
		"	Public Ledger
Nashville, Tenn.,	.	"	American
			Banner Weekly
Cincinnati, Ohio.,	Weekly		Abendpost
		"	Enquirer
		"	Gazette
		"	Volksfreund
Cleveland, Ohio.,	.	"	Herold
		"	Leader
		"	Plain Dealer
Columbus Ohio . .		"	Courier
		"	Ohio State Journal
		"	Westbote
Springfield, Ohio.,			Farm and Fireside
Steubenville, Ohio.,	Weekly		Herald
Toledo, Ohio.,	. .	"	Blade
Indianapolis, Ind.,			Indiana Farmer
			Indiana State Journal
			Indiana State Sentinel
			Weekly News
New Albany, Ind.			Ledger Standard
Notre Dame, Ind.,			Ave Maria
Shelbyville, Ind.,	.		Weekly Shelbyville Democrat
Terre Haute, Ind.,			Gazette
Vincennes, Ind . .			Commercial Weekly
Bloomington, Ill.,	.		Weekly Leader
		"	Pantagraph
Champaign, Ill.,	.		Champaign County Gazette
Chicago, Ill.,	. . .		Deutsche Warte

Chicago, Ill., . . .	Weekly Staats Zeitung
	" Inter Ocean
	" Irish Tribune
	" Journal
	" Katholisches Wochenblatt
	" Neue Freie Presse
	" News
	" Telegraph
	" Times
	" Tribune
Peoria, Ill., . . .	" Democrat
	" Transcript
Quincy, Ill., . . .	" Herald
	" Whig
Rockford, Ill. . . .	" Gazette
Rock Island, Ill. .	" Union
Springfield, Ill. .	" Ill. State Register
Adrian, Mich. . .	" Times and Expositor
Detroit, Mich. . .	" Free Press
	" Post and Tribune
Kalamazoo, Mich. .	" Gazette
Fon du Lac, Wis. .	" Commonwealth
Janesville, Wis. . .	" Gazette
Madison, Wis. . .	" Wisconsin State Journal
Milwaukee, Wis. .	" Wisconsin
	" Herold (German)
	" Sentinel
Kansas City, Mo. .	" Mail
	" Times
St. Louis, Mo. . .	" Anzeiger des Westens
	" Missouri Republican
	" Post-Dispatch
	" Times
	" Westliche Post
Burlington, Iowa. .	" Gazette
	" Hawkeye
Davenport, Iowa. .	" Democrat
	" Gazette
Des Moines, Iowa. .	" Iowa Staats Anzeiger
	" Iowa State Register
Dubuque, Iowa. . .	" Times
Iowa City, Iowa. .	" Republican
Keokuck, Iowa. . .	" Constitution
Marshalltown, Iowa	" Times Republican
Sioux City, Iowa. .	" Journal
St. Paul, Minn. . .	" Dispatch
	" Globe
	" Pioneer Press

Winona, Minn. . .	"	Republican
Atkison, Kansas .	"	Patriot
Emporia, Kansas. .	"	News
Leavenworth, Kan.	"	Appeal and Tribune
Topeka, Kansas. .	"	Kansas Farmer
	"	Commonwealth
Lincoln, Neb. . .	"	Neb. State Journal
Nebraska City, Neb	"	Press
Omaha, Neb. . . .	"	Bee
	"	Republican
Denver, Colo. . .	Colorado Farmer & Live Stock Journal.	
	Weekly Rocky Mountain News	
	"	Times
	"	Tribune
Pueblo, Colo. . . .	"	Colo. Chieftain
Los Angeles, Cal. .	"	Herald
	"	Express
Oakland, Cal. . . .	"	Times
Sacramento, Cal. .	"	Bee
San Francisco, Cal.	"	Alta California
	California Farmer	
	Weekly Chronicle	
	"	Post
Portland, Oregon. .	"	Oregonian
	Willamette Farmer	

NOVELTY MANUFACTURERS.

Bridgeport, Conn.	The Hatch & Holmes Mfg. Co
Waterbury, Conn. .	American Pin Co
	Novelty Mfg. Co
	The Chapman & Armstrong Mfg. Co
Chicago, Ill. . . .	Art Album Co
	Carr E. W., & Co
	Inventors Exchange
	U. S. Home Mfg. Co
	Wunder & Co
Boston, Mass. . . .	Bay State Mfg. Co
	M. W. Carr Co
	Novelty Brass Co
	Henry W. Peabody Co
	Wells Mfg. Co
Easton, Mass. . . .	N. E. Specialty Co
Leominster Mass. .	Dulite Novelty Co
Newburyport, Mass.	Chrolithion Novelty Co
North Adams Mass.	Novelty Mfg. Co
Worcester, Mass. .	Alex. McDonald
Detroit, Mich. . .	Black L., & Co
	Eagle Mfg. Co

Detroit, Mich :.....Metallic Goods Co
 St. Louis, Mo. . . . Coe Yonge & Co
 Omaha, Neb. . . . Pioneer Novelty Co
 Newark N. J. . . . Bogardus New Art Co
 Newark Novelty Co
 Newark Specialty Co
 N. Y. Auburn Novelty Co
 Brooklyn, N. R. . . Clinton Mfg. Co
 New York City. . . The Am. Artistic Gold Stamping Co
 American Pin Co
 Arlington Novelty Co
 Brass Goods Mfg. Co
 Celluloid Novelty Co
 Eureka Trick and Novelty Co
 The H. B. Hardenburg Co
 Harman & Straus Specialty Co
 Inventors Mfg. Co
 Kaufmann & Strauss
 Mnfs. Distributing Co
 Novelty Mfg. Co
 Rob. Sneider
 Union Metal Novelty Co
 C. F. Verzier
 Hoher H. Wellman
 World Mfg. Co
 Syracuse, N. Y. . . Novelty Mfg. Co
 Troy, N. Y. Troy Novelty Co
 Cincinnati, O. . . International Novelty Co
 Monarch Novelty Co
 Queen City Novelty Supply Co
 Girard, Pa. Keystone Mfg. Co
 Philadelphia, Pa. . A. C. Knight E Co
 Phila. Novelty Co
 A. Schoenhut & Co
 Watsontown, Pa. . Watsontown Novelty Co
 Providence, R. I. . Towel Rack & Novelty
 Vanstone Mfg. Co
 Springfield, Vt. . . Vermont Novelty Works Co
 Milwaukee, Wis. . Elite Mfg. Co

PAINT AND COLOR MANUFACTURERS.

San Francisco, Cal. California Paint Co
 Pacific Gilt Lead Works
 Pacific Rubber Paint Co
 Chicago, Ill. . . . Brainard Paint Co
 Cary-Ogden Co
 Chicago White Lead Co
 Matterson Bro & Co

Chicago, Ill :.....The Sherwin-Williams Co
 Baltimore, Ill :.....Rubber Paint Co
 John Briggs & Co
 C. E. Folsom & Co
 Jones & Co
 The Sherwin-Williams Co
 Detroit, Mich :.....Detroit White Lead Co
 Penins. W. L. and Color Works
 Minneapolis, Miss: W. W. Sly Paint Manfg Co
 St. Paul, Minn :.....Steams Paint Manfg Co
 St. Louis, Mo :.....Mound City Paint and Color Co
 G. M. Nelson Paint Co
 St. Louis Paint Manfg Co
 Standard Paint Co
 New York City :.....The Andrews Paint and Color Co
 Am. Mixed Paint Co
 A. B. Assbacher & Co
 Femoline Chemical Co
 Geo. N. Gardiner
 German Color Co
 Heller & Merz Co
 New York Insulating Co
 The Prince Manfg Co
 R. F. Seaman & Co
 Standard Paint Co
 S. P. Wetherill Co
 Troy, N. Y :.....Troy Paint and Color Works
 Cincinnati, O :Fav. Paint and Oil Works
 Cleveland, O :Iron-clad Paint Co
 Thompson Manfg Co
 Alleghany, Pa :M. B. Snyder & Co
 Philadelphia, Pa :...Eureka Paint and Color Works
 N. Z. Graves & Co
 Pittsburg, Pa :.....M. B. Snyder & Co
 Chattanooga, Tenn : Southern Paint and Color Co.
 Richmond, Va :.....C. W. Tanner & Co

PATENT MEDICINE MANUFACTURERS.

Chicago, Ill :.....Emmett Proprietary Co
 Foley & Co
 D. Kelly & Co
 Koenig Medicine Co
 J. B. Lynas & Co
 Marshall Medicine and Chemical Co
 Boston, Mass :.....Ame & Co
 Bedford Chemical Co
 Dam's Remedy Co
 Flower Medical Co

Westfield, Mass :.....J. W. Colton & Co
 Detroit, Mich :.....Williams, Farrand & Co
 Minneapolis, Minn : German Medicine Co
 St. Paul, Minn :.....Sigler Manfg Co
 Kansas City, Mo :...Benso Medicine Co
 St. Louis, Mo :.....Am Remedy Co
 S. Pfeiffer Manfg Co
 Southwestern Medicine Co
 Wolflard Salve Manfg Co
 Newark, N. J :.....B. S. Lauderdale & Co
 Buffalo, N. Y :.....Powell & Plimpton
 D. Ransom & Co
 New York City :.....J. P. Bush Manfg Co
 H. Planters & Son
 Winchester & Co
 Rochester, N. Y :.....A. B. Grover & Co
 G. Hahn & Co
 Troy, N. Y :.....L. Burton & Co
 J. L. Thompson & Co
 Cincinnati, O :Eureka Medicine Co
 J. N. Harris & Co
 John D. Park & Sons
 Philadelphia, Pa :...Geo. W. Ellis
 Providence, R. I :...Geo. A. Peckham
 Fort Worth, Texas : Dashwood Medical and Chemical Co
 Fond du Lac, Wis : Stiles & Givens Co

REFRIGERATOR MANUFACTURERS.

Chicago, Ill :.....Chicago Refrigerator Manfg Co
 Jackson Refrigerator Co
 Lorillard Refrigerator Co
 Geo. N. Pierre & Co
 Ridgeway Refrigerator Manfg Co
 Thayer Portable Refrigerator Co
 Wickes Refrigerator Co
 Morris, Ill :.....Globe Refrigerator Co
 Baltimore, Md :.....Roloson's Dry Air Refrigerator Co
 Grand Rapids, Mich : Grand Rapids Refrigerator Co
 St. Louis, Mo :.....St. Louis Refrig & Wooden Gutter Co.
 Buffalo, N. Y :... ..The Ross Pat. Refrigerator Co
 S. Gray & Co
 New York City :.....Belding Mfg Co
 L. H. Mace & Co
 Burlington, Vt :.....Baldwin Dry Air Refrigerator Co
 Philadelphia, Pa :...John P. Maher & Co
 Ridgeway Refrigerator Co

SADDLERY, HARNESS, &C.

Louisville, Ky :..... Harbison & Gathright
Langdon-Krieger Saddlery Co
New Orleans, La :... Baker, Slos & Co
St. Louis, Mo :..... P. Burns & Co
P. J. Peters Saddlery & Harness Co
Buffalo, N. Y :..... National Harness Co
New York City :..... Whitman Saddle Co
Cincinnati, O :..... D. S. Carrick & Co
Grossmann, Gouvion & Co

SEWING MACHINE MANUFACTURERS.

Hartford, Conn :..... Weed Sewing Machine Co
Chicago, Ill :..... Foley & Williams Mfg Co
Boston Mass :..... Reece Button Hole Machine Co
Florence, Mass :..... Florence Machine Co
New York City :..... Bonnaz Embroidering Machine Co
The Florence Machine Co
Kruse Mfg Co
National Machine Co
New Home Sewing Machine Co
Rotary Sewing Machine Co
Standard Sewing Machine Co
Tracy Sewing Machine Co
Union Special Sewing Machine Co
Wheeler & Wilson Mfg Co
Wilcox & Gibb, Sewing Machines
Philadelphia, Pa : Am. Button Hole, Overseam and S. Mach. Co
Button Sewing Machine Co
Deweese Fabric Trimmer Co
Domestic Sewing Machine Co
Lamb Machine Co
Singer Mfg Co

STEAM ENGINE MANUFACTURERS.

(See also Iron Works, Machinery, etc.)

San Francisco, Cal : Atlas Iron Works
C. H. Evans & Co
Hartford, Conn :..... The Hartford Dynamic Co
New Haven, Conn :.. The Norwalk Iron Works
Wilmington, Del : ... Remington Machine Co
Chicago, Ill : Rob. Tarrant
Boston, Mass :..... Atlantic Works
Ge. K. Paul & Co
Detroit, Mich :..... The Collier Steam Yacht & Engine Works
Fulton Iron & Engine Works
St. Louis, Mo :..... L. M. Rumsey Mfg Co
South New Market, N. H. : Swamscot Machine Co

Buffalo, N. Y :.....H. G. Trout
 Fishkill-on-the Hudson, N. Y : Fishkill Landing Mach. Co
 Newburgh, N. Y :...William Wright
 New York City :.....N. Y. Engineering Co
 N. Y. Safety Steam Co
 Skinner Engine Co
 Triple Thermic Motor Co
 Wells Engine Co
 Westlinghouse Church, Kerr & Co
 Troy, N. Y :.....Knowlson & Kelley
 Salem, O :.....Buckeye Engine Co
 Allegheny, Pa :.....Thos. Carlin's Sons
 Corry, Pa :.....H. King & Sons
 Philadelphia, Pa :...High Bros & Co
 Jos. Lumley
 M. R. Muchle
 Neafie & Levy
 Pittsburg, Pa :.....Thos. Carlin's Sons
 Combination Engine Co
 Robinson Rea Mfg
 Nashville, Tenn :....Davidson Engine Co
 Madison, Wis :.....Madison Mfg Co
 Milwaukee, Wis :...The Wilkin Mfg Co
 Racine, Wis :.....Racine Hardware Mfg Co

STEAM HEATING.

Denver, Col :.....Hughes & Keith, Sanitary Supply Co
 New Haven, Conn :..New Haven Steam Heating Co
 Washington, D. C :..Florida Steam & Hot Water Heaters
 Chicago, Ill :.....The John Davis Co
 A. A. Griffing Iron Co
 Rice & Witacre Mfg Co
 Baltimore, Md :.....Bartlett, Hayward & Co
 Wm E Wood & Co
 Boston, Mass :L. Descalzo & Co
 Gurney Hot Water Heater Co
 Kohler Furnace & Steam Heating Co
 B. F. Sturtevant
 Detroit, Mich :.....Detroit Radiator Co
 A. Harvey & Son
 Minneapolis, Minn : Haptun Steam Heater Co
 Porter Steam Heater Co
 St. Paul, Minn :.....Young Safety Heating Co
 St. Louis, Mo :.....St. Louis Steam Heating & Ventil. Co
 Omaha, Neb :.....Strang & Clark
 New York City :.....Gold Car Heating Co
 The Gaubert Mfg Co
 Gurney Hot Water Heater Co

New York City :.....J. F. Pease Heaters
 New York Steam Co
 Syracuse, N. Y :.....Pierre, Butler & Pierre Mfg Co
 Reading, Pa :.....Reading Steam Heating & Vintel. Works
 Providence R. I :.....Providence Steam Heating Co
 Milwaukee, Wis :... Bayley Steam Heating Co

STEAM PUMP MANUFACTURERS.

Los Angeles, Cal : ..Dow Steam Pump Works
 Chicago, Ill :..... Barr Pumping Engine Co
 Nye Steam Vacuum Pump Co
 Dubuque, Ia :.....National Iron & Brass Works
 Boston, Mass :.....John Post, Jr. & Co
 Holyoke, Mass :.....Dean Steam Pump Co
 St. Louis, Mo :.....Henry Worthington
 Omaha, Neb :Churchill Pump Co
 Jersey City, N. J :...Maslin's Pulsator Pump
 Brooklyn, N. Y :.....Clayton Steam Pump Works
 Niagara Steam Pump Works
 Buffalo, N. Y :.....The Buffalo Steam Pump Co
 New York City :.....Hall Steam Pump Co
 Woodward Steam Pump Co
 Canton, O :.....The Canton Steam Pump Co
 Cincinnati, O :..... Brandford Well and Pump Co
 Philadelphia, Pa :... Barr Pumping Engine Co
 Gordon Steam Pump Co
 Pittsburg, Pa :..... Kay Bro. & Co
 Pittsburg Supply Co

STOCK BROKERS.

Mobile, Ala :.....F. W. Miller & Co
 San Francisco, Cal : A. J. Angell
 W. Bannan & Co
 E. Cahill & Co
 Donovan & Weinschenk
 A. W. Foster & Co
 E. Gauthier & Co
 Greene & Co
 C. P. Harris & Co
 C. H. Kauffman
 Ives & Co
 Kuhl, Roemer & Co
 Manheim, Staples & Co
 H. H. Noble & Co
 Otis & Co
 Rebfish & Co
 Salomon Manfg Co
 H. B. Smith, Jr.

San Francisco, Cal :	W. D. Valentine & Co
	S. B. Wakefield & Co
	T. Whitely & Co
Hartford, Conn.....	R. R. Abbe
	J. B. Russell
	J. G. Woodward
New Haven, Conn...	Brunnell & Scranton
	W. T. Hatch & Sons
Wilmington, Del....	R. R. Robinson & Co
Washington, D. C...	E. Brand & Co
	Cooke & Co
	C. T. Havener & Co
	Moore & Schley
	B. K. Plain Co
	B. B. Williams
Atlanta, Ga.....	H. Castleman
	J. A. Hall
	E. T. Paine
	The Tolleson Commission Co
Augusta, Ga.....	J. J. Cohen
	J. U. Jackson
Columbus, Ga.....	J. Blackman
	Johnson & Norman
Macon, Ga.....	G. T. Kershaw
	J. W. Lockett
Savannah, Ga.....	H. Blim
	J. Ehlen
	G. W. Lamar
	L. A. Wakeman
Chicago, Ill.....	C. V. Banta
	D. F. Baxter
	A. J. Cutler
	A. Durham
	L. H. Freiburger
	M. Straus
	W. B. Wrenn
Fort Wayne Ind :...	L. C. Hurm
Lafayette, Ind :	Potter & Orth
Louisville, Ky :.....	Almstedt Bros
	J. T. G. Galt
	John Green
New Orleans, La:...	H. Bier
	J. L. Herwig
	J. Klein & Co
	H. Lange
	A. J. Louis
	E. Eisenhauer
Portland, Me:.....	J. S. Morris

Portland, Me :.....A. Shurtleff
 Baltimore, Md :R. H. Harris
 C L. Howell
 Kummer & Becker
 G. Ober
 Boston, Mass :.....Adams, Blodgett & Co
 M. R. Ballou
 J. H. Brown
 Chase & Barstow
 J. E. Hall
 F. N. Mudge
 B. F. Tenney
 H. Walter & Co
 Waterman & Co
 Minneapolis, Minn : G. W. Hood, Jr.
 M S. Lewis
 St. Paul, Minn :.....Doran M. & Co., 311 Jackson
 Levy A. M., 20 Gilfillan blk
 Maher E. A. & Co., 307 Jackson
 Murray, Rank & Co., 23 Nat'l G.A. bank bldg
 Stokes S S, 333 Jackson
 Walker & Co., 1 Gilfillan blk
 Kansas City, Mo : .Abell M. B., 11 Wales bldg
 Arnold J. H., 3 James bldg
 Jarvis, Conklin Mortgage Tr. Co., N.E. bldg
 Wallman W. J. & Co. 12 Wales bldg
 St. Louis, Mo :H Brentano
 J Campbell
 Donaldson Bond and Stock Co
 A. G. Edwards & Son
 L. Goldman
 Kohn & Co
 U S. Investment Co
 W. F. Wernse & Co
 Omaha, Neb :.....Dale J., 404 Merchants Nat. Bank bldg
 Dike A P., 310 S 15th
 Wilson W. A., 1418 Harney
 Brooklyn, N. Y :.....J. Lehrenkrauss
 G. H. Prentiss & Co
 Buffalo, N. Y :.....A. Church
 W. R. McNiven
 New York City :.....Am. Investment and Finance Co
 G. A. Bergman
 I. S. Bernheimer
 Blum & St. Goar
 James Boys Co
 C. H. Currie
 J. R. Day

New York City :...Emerson & Co
 L. S. Frankenheimer
 Gregory, Ballou & Co
 G. M. Hahn-
 Keilholz Bros
 Kohn, Popper & Co
 E. L. Oppenheimer & Co
 Randall & Wierum
 Rosenheim & Herzog
 I. Sonnenberger
 Springer & Co
 Rochester, N. Y :...W. C. Fox & Co
 J. M. Lux
 A. Robinson
 Troy, N. Y :L. Boardman
 Neher & Carpenter
 Ogden, Calder & Co
 W. W. Willard
 Cincinnati, O :.....W. S. Brown
 R. E. Dunlap
 G. W. Durrell
 J. W. Haley
 S. B. Keys
 E. N. Laralde
 I. N. Stoeckle
 J. H. Vornholz
 I. Wolf
 Cleveland, O :.....H. C. Dening
 T. A. Kelley
 C. H. Potter & Co
 C. C. Viall & Co
 Columbus, O :.....Hanson & Co
 J. N. Champion
 Dayton, O :.....M. Schaefer
 J. A. Schieble
 Springfield, O :.....W. S. Thomas & Bro.
 L. S. Weaver
 Philadelphia, Pa :...H. F. Bachman
 H. Borden & Co
 W. Curtiss
 A. D. & W. P. Fell
 E. Henderson
 Howard, Bell & Co
 F. Huth
 E. W. Keene
 T. C. Knight
 K. W. Magill & Co
 Moelling & Autenreith

Philadelphia, Pa:...W. S. Myers & Co
 E. B. Pall
 Philadeldhia Stock Exchange
 Stahl & Straub
 S. H. Thomas
 J. K. Wildman
 E. K. Wohlgamuth
 Pittsburg, Pa:.....S. Arnold
 S. W. Black & Co
 J. W. Drape & Co
 Geo. B. Hill & Co
 Kuhn Bros
 S. J. Pentecost
 Whitney & Stephenson
 Providence, R. I: B. B. Barrows
 H. C. Cranston
 H. Pearce
 S. Frash & Co
 Q. R. Weeden & Co
 J. Wilbur & Co
 Charleston, S. C:..Cochran & Alexander
 H. DeLeon
 Norfolk, Va:.....Morris & Morris
 C. T. Sydnor
 Richmond, Va:.....C. W. Branch & Co
 Davenport & Co
 R. W. Maury
 W. G. Taylor & Co
 J. C. Williams
 Nashville, Tenn:..Arrington & Farrar
 J. Davis
 H. Scovel
 Moore & Co
 Brownsville, Tex: E. C. Forto
 Corsicana, Tex:.....Frost & Barry
 Dallas, Tex:A. W. Childress
 Galveston, Tex:.....B. A. Isaacs & Co
 Houston, Tex:Canon & Seligson
 Milwaukee, Wis:..E. H. Goodrich
 F. S. Iole
 Alexander Cohen

STOVE MANUFACTURERS.

San Francisco, Cal: San Francisco Stove Works
 Denver, Col:.....Great Western Stove Co
 Stamford, Conn:.....Stamford Foundry
 Chicago, Ill:.....Calorific Wonder Co
 Chicago Stove Works

Chicago, Ill:.....Fuller & Warren Co
 Louisville, Ky:.....Bridgford & Co
 The Progressive Stove Works
 Baltimore, Md:.....The B. C. Bibb Stove Co
 S. B. Sexton & Son
 Isaac A. Sheppard & Co
 Wm. E. Wood & Co
 Boston, Mass; Barstow Stove Co
 Boston Furnace Co
 Smith & Anthony Stove Co
 Detroit, Mich:.....Detroit Stove Works
 Michigan Stove Works
 Peninsular Stove Co
 Minneapolis, Minn: Northwestern Stove Works
 St. Paul, Minn:Central Stove Works
 Kansas, Mo:C. W. Fairman Stove Co
 St. Louis, Mo:.....Bridge & Beach Co
 Evers Stove Mfg Co
 Omaha, Neb: Duffey Trowbridge Stove Mfg Co
 Albany, N. Y:Albany Stove Co
 New York City.....J. L. Mott Iron Works
 Peekskill Stove Works
 Richardson & Boynton Co
 The Richardson & Morgan Co
 Rochester, N. Y:...Sill Stove Works
 Troy, N. Y;.....Troy Arch. Iron Works and Foundry
 Cincinnati, O:Chamberlain Stove Co
 Cleveland, O:.....Winslow Safety Car Stove Co
 The Standard Lighting Co
 Columbus, O:Capital City Stove Co. Works
 Mansfield, O:The Ohio Valley Foundry Co
 Philadelphia, Pa:...Abraham Cox Stove Co
 Pittsburg, Pa:.....Crea, Graham & Co
 Nashville, Tenn;..Phillips & Buttorff Mfg Co
 Milwaukee, Wis;...Brand Stove Co

TINWARE MANUFACTURERS.

Chicago, Ill:.....Chicago Stamping Co
 Chicago Tin & Hardware Co
 C. Shepard, Sidney & Co
 Baltimore, Md:.....Mathews, Ingram & Co
 Boston, Mass:.....Dover Stamping Co
 Lalaurge Grosjean Mfg Co
 Hollander, Bradshaw & Folsom
 Elmira, N. Y:.....S. H. Lancy
 New York City.....The Central Stamping Co
 Reilley Bros
 Cincinnati, O:The Cincinnati Stamping Co

Cincinnati, O:Western Tin and Japan Mfg Co
Philadelphia, Pa:....C. P. Pool & Co
Milwaukee, Wis:.... Kieckhefer Bros. & Co

TOOL MANUFACTURERS.

San Francisco, Cal: San Francisco Tool Co
Hartford, Conn:.....The Billings & Spencer Co
Chicago, Ill:.....Cleveland Twist Drill Co
Bangor, Me:E. Mansfield & Co
Boston, Mass:Am. Axe and Tool Co
 Goodnow & Wightman
 H. H. Harvey
 Tremont Mfg Co
Springfield, Mass:.. Hardware & Tool Co
Detroit, Mich:Detr. Edge & Tool Works
St. Louis, Mo:.....Western Forge and Tool Works
Buffalo, N. Y:.....American Bit Brace Co.
New York, N. Y:....American Pneumatic Tool Co
 American Tool Co
 Manhattan Tool Co
Syracuse, N. Y:.....Syracuse Twist Drill Co
Cleveland, O:.....Standard Tool Co
 The Worden Tool Co
Meadville, Pa:.....Barret Vice and Tool Co.
Philadelphia, Pa:..Geo. J. Ellis & Sons
 Palmer, Cunningham & Co
Pittsburg, Pa:.....Iron City Tool Works
Madison, Wis:.....Lake City Tool Co

TOY MANUFACTURERS.

Birmingham, Conn:A. B. Ruggles
Bridgeport, Conn:..Ives, Blakeslee & Co
 C. Ritchel
 Watson Iron Works Co
Chatham, Conn:....Thewall Mfg Co
Derby, Conn:.....Gilbert & Sons
Durham, Conn:.....Merriam Mfg Co
East Hampton, Conn: Bevis Bro. Mfg Co
 East Hampton Bell Co
New Haven, Conn: C. D. Goodwin
Middletown, Conn: W. F. Chapman & Co
 Samuel Kirby
Plymouth, Conn:..Whistle Wheel Toy Co
South Norwalk, Conn: Lockwood Mfg Co
Chicago, Ill:.....Chicago Toy & Fancy Goods Co
 Colby Toy Mfg Co
 St. Nicholas Mfg Co
Baltimore, Md:.....N. Y. Toy & Novelty Mfg Co

Fitchburg, Mass:...Novelty Turning Co
 Leominster, Mass., The W. S. Reed Co
 Lowell, Mass.,.....Merrimack Croquet Co
 New Bedford, Mass., Weedon Mfg Co
 Springfield, Mass.,...Milton Bradley Co
 Worcester, Mass., Rowson Bee Hive Co
 Coldwater, Mich.,...Stevens & Sperry
 Detroit, Mich.,.....Henry C. Hart Mfg Co
 Grand Rapids, Mich., Crescent Mfg Co
 Pattersville, Mich.,...Benton Mfg Co
 Bristol, N. H.,.....A. Hutchinson
 Clearmount, N. H....Union Toy Foundry Works
 Nashua, N. H.,.....Nashua Novelty Works
 New York, N. Y.,...Eureka Trick & Novelty Works
 McLaughlin Brothers
 The Stobel & Wilken Co
 Weston Toy Co
 Wilson Brothers
 Cincinnati, O.,.....P. J. Marqua Co
 Philadelphia, Pa.,...S. E. Clark
 James Fallows & Sons
 D. Highman & Sons
 Milwaukee, Wis.,...Instructive Toy Co

TURNERS.

San Francisco, Cal: San Francisco Wood and Ivory Works
 New Haven, Conn.: The J. Smith Co
 Chicago, Ill;M. Garrison.
 Keller & Co
 Fitchburg, Mass:...Novelty Turning Co
 Worcester, Mass:...O. B. Rawson
 Newark, N. J.:.....John B. Oelkers
 Patterson, N. J.:.....B. Atkinson
 New York City:.....E. B. Estes & Son
 New York Pattern Mach. and Dic. Co
 Alleghany, Pa:.....Alleg. Geomet. Wood Carving Co

VENTILATORS.

San Francisco, Cal: P. H. Jackson & Co
 Chicago, Ill:Andrews & Johnson
 Cool Air Drying and Ventilating Co
 Boston, Mass.,National Ventilation Co
 B. F. Sturtevant
 U. S. Aerophor Air Moist & Venti. Co
 U. S. Ventilation Co
 Minneapolis, Minn., Emery Mfg Co
 St. Paul, Minn.,.....Exhaust Ventilator Co

New York City.....Gouge Heating & Ventilating Co
 The Simmonds Mfg Co
 Standard Ventilating Co
 The Sanitary Ventilating Co

WASHING MACHINES, WRINGERS, &c.

Chicago, Ill:..... Colby Wringer Co
 Troy Laundry Machine Co
 Fort Wayne, Ind.,...Horton Mfg Co
 Boston, Mass.,.....J. F. Baldwin & Co
 New York City,..... Cataract Washing Machine Co
 Empire Laundry Machine Co
 The A. M. Dolph Co
 Troy, N. Y.,.....Adams Laundry Machine Co
 Cincinnati, O.,F. M. Watkins
 Alleghany, Pa.,.....Loyal Mfg. Co
 Philadelphia, Pa.,...Restein Mfg. Co



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